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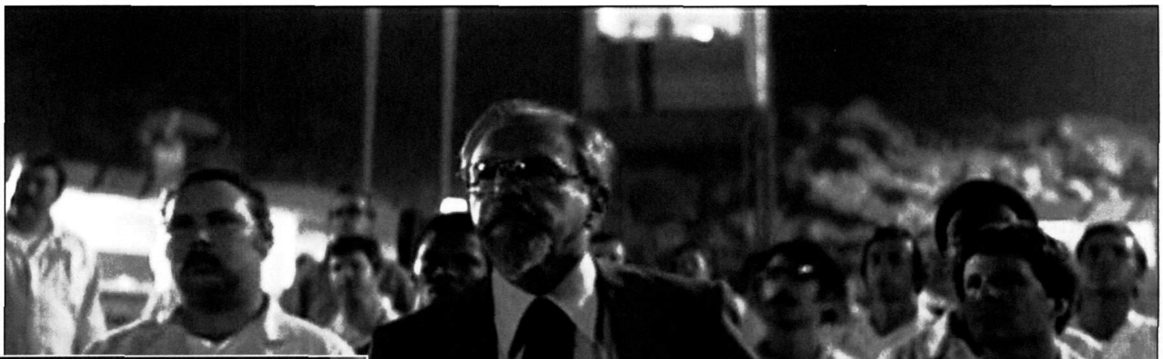

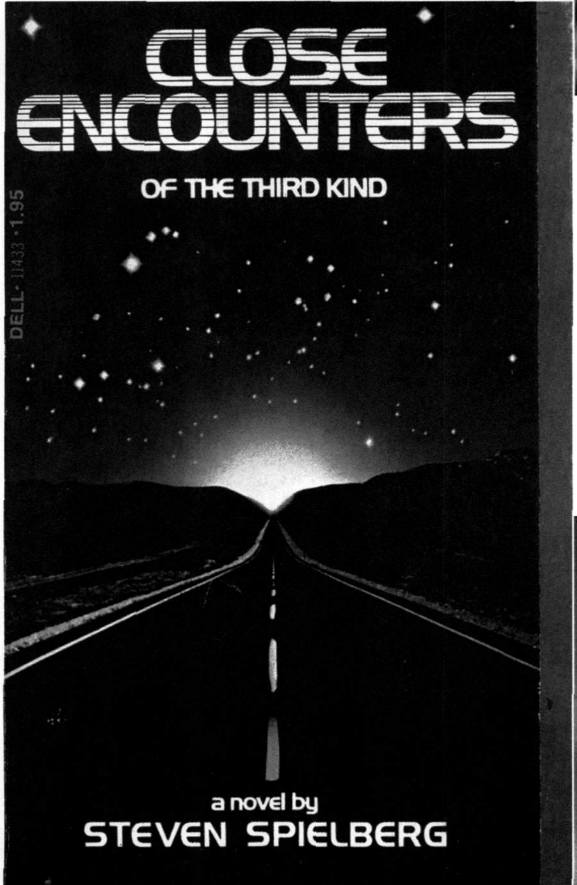

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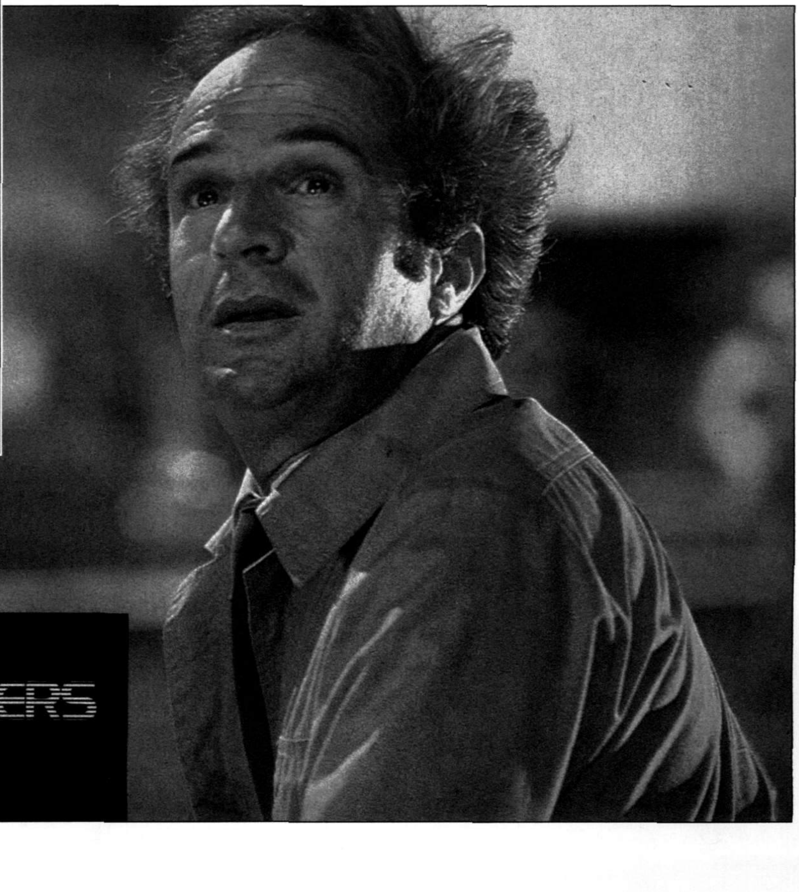
CLOSE ENCOUNTERS
OF THE THIRD KIND
A COLUMBIA EMI Presentation

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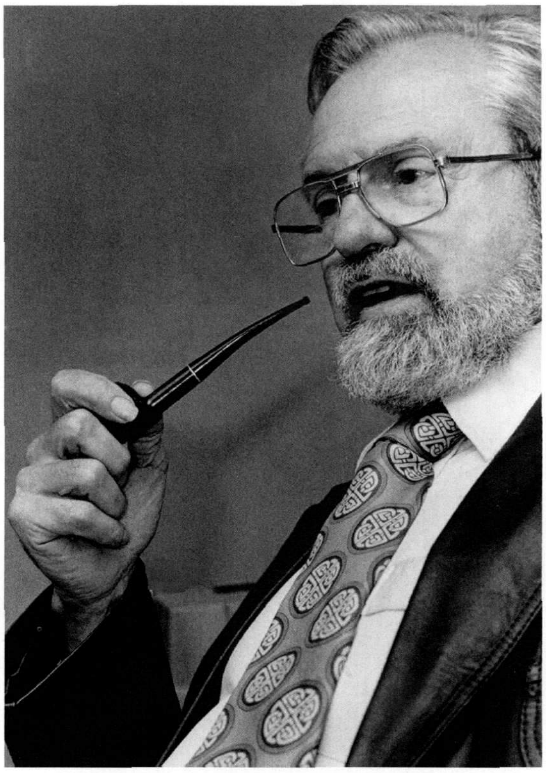

J. Allen Hynek
1910-1986

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A UAP AND ITS SAFETY IMPLICATIONS:

O'HARE INTERNATIONAL AIRPORT, NOV. 7, 2006

BY RICHARD F. HAINES, CHIEF SCIENTIST

WITH

K. EFISHOFF, D. LEDGER, L. LEMKE, S. MARANTO, W. PUCKETT, T. ROE, M. SHOUGH, R. URIARTE

This report presents the results of an investigation into an incident at O'Hare International Airport (ORD) on November 7, 2006, at about 4:15 p.m. CST that had definite safety implications. A number of highly reliable airline employees and others reported seeing a round, revolving, gray, metallic-appearing object [hereafter called an Unidentified Aerial Phenomenon (UAP)] hovering approximately above United Airlines Gate C17 at an altitude less than 1,900 feet above ground level and departing sometime between 4:18 and 4:33 p.m.

Based on eyewitness testimony, the UAP would have ranged in size from about 22 to 88 feet in diameter. It accelerated at a steeply inclined angle through the 1,900-foot cloud base, leaving a round hole approximately its own size that lasted for as long as 14 minutes. This is suggestive of a super-heated object or otherwise radiated (microwave?) heat energy on the order of 9.4 kJ/m^3.

According to the Federal Aviation Administration, nothing was detected by radar at this location or time of day or seen by air traffic controllers from the main tower. An examination of primary radar data supplied by the FAA confirmed the first claim. Nevertheless, an FAA inbound ground controller remarked about the "UFO" (UAP) at about 3:58:09 p.m., long before the object had departed. No reference to a UAP is made by any inbound or outbound flight crew other than two United maintenance taxi mechanics moving an empty airplane to the maintenance hangar on the north side of the airport. Of course, this does not mean that there was no object present but only that these flight crews did not discuss it over the radio.

Our analyses suggest that a potentially significant air safety problem existed at O'Hare International Airport on the afternoon of November 7, 2006. When an airborne object can hover for several minutes over a busy airport but not be registered on radar or seen visually from the control tower, it constitutes a potential threat to flight safety. The identity of the UAP remains unknown. An official government inquiry should be carried out to evaluate whether or not current sensing technologies are adequate to insure against a future incident such as this.

UNITED AIRLINES EMPLOYEE ACCOUNTS

The following narrative presents an approximate chronological reconstruction of what took place during this incident and shows where each eyewitness was at the time. Relevant gate numbers are marked on an aerial photograph of the airport property taken from an altitude of 1,600 feet (Figure 1). Letters identify each witness. The identity of all eyewitnesses has been concealed at their request to safeguard their reputation and job security.

Witness A. The earliest known witness was Mr. X.X. (Witness A) who was assisting the pushback of a Boeing 737-500 from Gate C17. He was standing on the tarmac beside

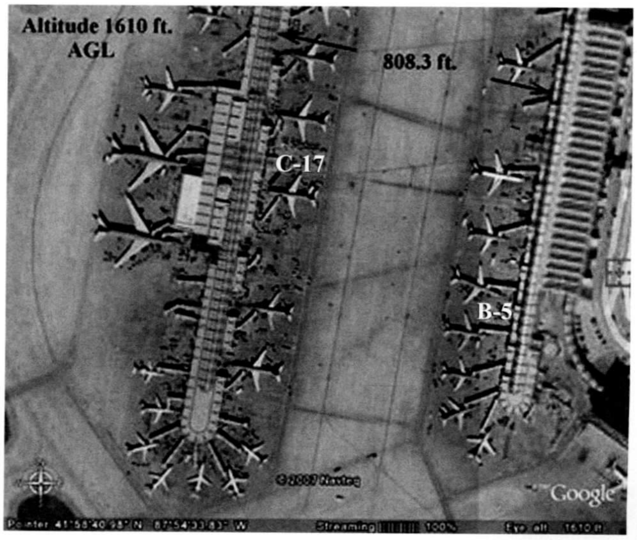

Fig. 1. Aerial photograph of United Concourses B and C from an altitude of 1,610 feet.

Richard F. Haines is chief scientist for the National Aviation Reporting Center on Anomalous Phenomena and was the former chief of the Space Human Factors Office at NASA Ames Research Center in California.

Witness	Job Category (all United AL)	Location
A	Ramp Mechanic	Standing beside B737 at C17
B	Aviation Mechanic	Left Cockpit Seat in B-777 taxiing on Alpha
C	Supervisor	Outside at Gate B5
D	Ramp Mechanic	Near C17
E	Supervisor	Near B5
F	Capt. B737-500	Near C17
H	First Officer B737-500	Near C17
I	Aviation Mechanic	International Terminal ramp area

Table 1. Airline employee eyewitnesses.

the nose of the jet with his communication headset cable plugged into a connection port in the nose of the airplane. Witness A said that at about 4:30 p.m., "he was compelled to look straight up for some reason and was startled to see the craft hovering silently." He then made a radio call over his headset to the airline's operation center to Sylvia, the United Airlines Zone 5 control coordinator who is responsible for 10 gates.

He then told the cockpit crew in the airplane beside him about what he was looking at. One or both of the crew allegedly opened their side windows and looked up at the UAP; however, this cannot be confirmed. Later, Witness A said that he thought the object was between 500 and 1,000 feet altitude directly above his gate. He was sure that the UAP was round and rotating "pretty fast." He said that the object "shot off into the clouds about two minutes after his initial sighting . . . [and] that it was about the same angular size as a quarter held at arm's length (26″) (just over two deg. arc diameter)." He estimated that between 10 and 15 people had seen the object.

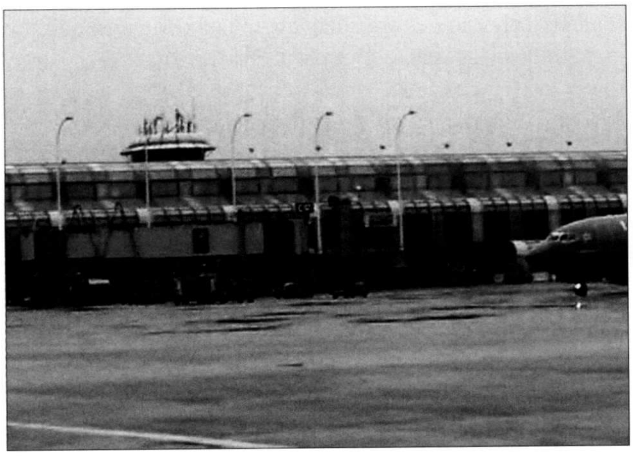

Fig. 2. View of United Concourse C and Gate C17, visible at center (United Ramp Control Tower seen on roof at left center).

Witnesses B (left cockpit seat) and C (right seat), both United aviation mechanics, were about to taxi an empty commercial jet airplane from the International Ramp initially near D2 to the United Service Center hangar on the north side of the airport. At this point there are two slightly different alternative versions of what happened next.

In the first version, the details provided to NARCAP by Witness B are given. He said that while they were parked, they both overheard a radio message from the flight crew of the B-737-500 at Gate C17 talking on their company frequency about "a circle or disc shapped [sic] object hovering over gate."

This fact tends to confirm that at least one of the two cockpit crewmen in the B-737-500 looked up at the object, i.e., either Witness G and/or H. Witness B continued, "At frist [sic] we laughed [sic] to each other and then the same pilot said again on the radio that it was about 700 feet agl [above ground level]. . . The radio irrupted [sic] with chatter about the object and the ATC controller that was handling ground traffic made a few smart comments about the alleged UFO siting [sic] above the C terminal."

According to Witness B, they then began to taxi the airplane to the west around Taxiway Alpha (approaching United Concourse C on their right). Radio communications with the inbound ground controller showed that they began their taxi at 3:57:30 p.m. During their taxiing, Witness C was in radio contact with inbound ground control for directions to their destination; he would have used the call sign "United maintenance-44." Just before reaching A-14 or A-13, both witnesses leaned forward and looked diagonally to the right in the direction of Gate C17.

Witness B estimated that the object was hovering about 100 to 200 feet beneath the clouds. The UAP was seen in the upper-right corner of the left-front cockpit windshield. It was stationary and did not appear to be revolving. To him it appeared "hazy" on its bottom and both ends but clearer on top; even if they had not been alerted to its presence by a radio contact, it was clearly conspicuous to the naked eye. It never changed brightness, color, or shape at any time during his 30 to 60–second-long viewing period. It didn't flash or give off any lights and "it was definitely not a blimp."

Unfortunately, the negative reaction of United management and some of his coworkers caused Witness C to be totally unwilling to cooperate in any way with this investigation. A detailed questionnaire was mailed to him on November 24, 2006, but he did not respond.

At no time during the entire (approximately) 18-minute taxi time (Witness A provided the following route, "Alpha–Juliet–Zulu–Echo–Yankee–United Service Center") were any electrical problems noted in his cockpit nor was any unusual radio static heard. He overheard the United ramp controller ask if anyone could get a picture of the UAP. He also overheard the ground controller say that the object wasn't seen from the ATC tower, "even though it would have been in their field of view. Then the tower told us to move. We were facing west at the time and I could look at American Airlines, Terminal 3. The [ramp] tower guy said

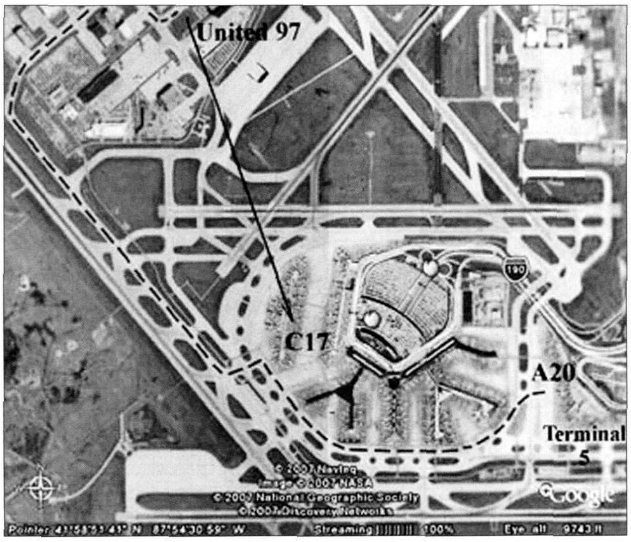
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Fig. 3. Aerial photograph of taxi path of B-777

he didn't see it and I heard him laughing. Then we passed Concourse C where I looked over and didn't see it anymore [but] my partner watched it go up into the clouds and [it] left a hole there."

The taxi transit time of the Boeing 777 is between 14 and 22 minutes from D2 to the maintenance hangar. Knowing this as well as the length of the airplane's taxi path, it was estimated that the UAP could have been visible from the cockpit for between 3.2 and 5 minutes between A17 and A8. United maintenance 44 made only one stop for an American Airlines McDonnell Douglas MD-80. A total taxi time of about 24 minutes is assumed. Only after parking the aircraft near the hangar at about 4:22 pm (± 3 min.) were witnesses B and C able to look back in the direction of the UAP where they could still see a "smooth round hole" in the overcast, but no object.

Witness B estimated that the hole must have remained open about two minutes more although he could not be sure. Witness B remarked, "I guess it had just left." He felt that the object hovered from 100 to 200 feet under the cloud base and "it wasn't a reflection." He said he heard a tower controller say, "There's nothing there that would reflect lights."

There was a brief conversation between the inbound ground controller and a taxi mechanic who said that he and others witnessed the object about one-half hour earlier. He also remarked, "There must have been hundreds of witnesses. I got some positive responses from about three other guys I work with." He also offered that the actions of the UAP seemed "very deliberate given the weather conditions and the airport operations at the time." He wrote, "I am still in absolute wonder and amazement at what I saw that afternoon."

A careful analysis of the inbound ground controller tapes showed that there were three United Airlines airplanes taxiing to the maintenance hangar during this time, United maintenance 97 (a Boeing 747), United maintenance 5 (a Boeing 777), and United maintenance 44 (another Boeing 777). We are concerned only with the latter, which contained Witnesses B and C.

At 4:48:05 p.m., a male voice allegedly coming from one of the two above airplanes broke into an ongoing conversation between Gateway Flight 5668 and the inbound ground controller. Here is that interaction, starting at about 4:47:39 p.m. (where A/C1 = Gateway 5668; A/C2 = United 44; T = inbound ground controller).

> *T:* Gateway 5668.
>
> *A/C1:* Gateway 5668.
>
> *T:* Yeh . . . look out your window. Do you see anything above United concourse? They actually, believe it or not, they called us and said, somebody observed a flying disc about a thousand feet above the, ah . . . Gate Charley 17. Do you see anything over there?
>
> [Pause of about 5 seconds.]
>
> *A/C1:* Not that I can tell. I thought my job was stressful (laughter).
>
> *A/C2:* [Witness B] Oh, we saw it a half hour ago.
>
> *T:* Who saw it?
>
> *A/C2:* A whole bunch of us over at the, ah Charley concourse.
>
> *T:* Really? You guys did? Who is this?
>
> *A/C2:* United taxi mechanics. [5-second pause.] We thought it was a balloon, but we're not sure.

Note that a half-hour before this statement by the alleged eyewitness would be about 4:18 p.m.

At this point Witnesses B and C are either at gate C10 or at the United maintenance hangar. NARCAP's reconstruction assumes the latter.

According to a report submitted to the National UFO Reporting Center, Witness D was working in his office when he heard the operations center announcement about the UAP over the company's radio frequency at about 4:30 p.m. He immediately left his office and walked to the Gate B5 area where he looked up and saw the UAP located at about a 45-degree (vertical) angle.

He was quoted as saying, "I stood outside in the gate area not knowing what to think, just trying to figure out what it was. . . . I knew no one would make a false call like that. But if somebody was bouncing a weather balloon or something else over O'Hare, we had to stop it because it was in very close proximity to our flight operations."

He also said, "I'm absolutely convinced the object wasn't much bigger than 6 to 10 feet in diameter. He described the UAP as an "elliptical sphere-like dark metal object." From his location he said that the object rose almost instantaneously at a slight angle toward the east. Its departure was so fast that he thought he could see a kind of blurred effect in his vision from the object. Another employee (Witness E) was standing with him at the time. Later he admitted that if it ever happened again, he "probably would report it."

He also mentioned the presence of another airline employee (Witness F) who saw the object for about 30 seconds but, because of its small visual size, "dismissed it as a bird and walked away." He immediately called the operations center to confirm the sighting and returned to his office briefly and then drove over to Concourse C to talk with the witnesses there. During this time, the zone controller asked if the object was still present. It was she who called the FAA control tower to inquire about it. The United shift manager, Transportation Security Administration, and the United World Headquarters Operations Center were also notified at about this time. He reiterated this detail several times during later conversations.

Within about a day after the incident, Witness B met Witness I, also a mechanic, at the International Terminal ramp area, who admitted having also seen the UAP from that vantage. Unfortunately, Witness I could not be located for an interview.

Chicago Tribune reporter Jon Hilkevitch interviewed the First Officer of the B737-500 (Witness H) that was still parked at Gate C17. He discovered that both of these flight crewmen saw the object for about five minutes. Both opened their cockpit side windows and looked up at the object. The First Officer, age 39 with over 13,000 flight hours, said the UAP was a dirty-aluminum color, very stable, and without any optical distortions near it. It was perfectly round and silent. He said that neither he nor the captain took a photo of the object. A company supervisor arrived and ordered them to push back for a scheduled departure time. The captain refused to be interviewed.

How large was the UAP?

Because the UAP hovered below a cloud base of about 1,900 feet, that fact established its maximum distance. Several witnesses provided angular diameter estimates for the UAP that made it possible to calculate its maximum diameter, assuming it was at the distance of the cloud base.

Witness A said it was equivalent in angular size to a quarter held at arm's length or about 2° 4″ arc. The object would have to be 88 feet across at 1,900 feet altitude to have the same angular size. Similarly, Witness D said the UAP was about the same size as the end of a pencil held at arm's length (about 36″ of arc in diameter), which is equivalent to a 22-foot diameter object located 2,093 feet away. If the UAP were at a lower altitude, then its visual size would increase slightly. Thus, if it is assumed that the UAP was at 1,500 feet altitude, these same two witness estimates become 69 feet and 18 feet, respectively.

Witness J.H., standing in a parking lot about a mile east, estimated its diameter to be from 25 to 30 feet. Witness "Ramp agent X," located somewhere near Concourse C, thought it was about 20 feet in diameter. These are remarkably similar estimates.

At what altitude did the UAP hover?

Estimates vary from 500 feet to 1,700 feet above the ground. Interestingly, the two witnesses who were directly beneath the object (Witness A and G) gave the lowest estimates and were in the poorest position to make such a judgment. Witness A thought it was from 500 to 1,000 feet and Witness G, 700 feet.

Other witnesses who were able to see the object from a greater distance and at an oblique (nearer to a side view) angle gave higher estimates of its altitude. Witness D standing about 878 feet from C17 and looking up at about a 45-degree angle thought it was 1,000 feet high. However, this vertical angle would place the UAP at a calculated altitude of only 878 feet. Witness B near Taxiway A17 at the International Terminal estimated its altitude at between 1,700 feet and 1,800 feet, while Witness J.H., some 5,400 feet away in the southwest corner of the International Terminal's parking lot, thought it was between 1,100 and 1,400 feet. These estimates are not in basic conflict with later calculated values for the altitude of an object above C17 that could not be seen from the control tower, namely, between 1,438 feet and 1,802 feet (based on the FAA claim that the UAP was not seen from the control tower).

Visibility from the Control Tower

The new control tower at O'Hare is 253 feet tall, shown in Figure 4. The ATC work area is at the level of the transparent outward sloping windows.

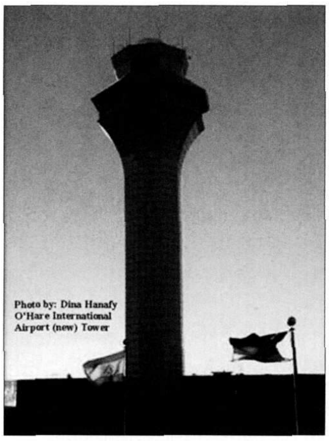


Photo by: Dina Hanafy
O'Hare International
Airport (new) Tower

Fig. 4. New O'Hare Airport Control Tower.

The FAA stated publicly that no one in the air traffic control tower saw the UAP. Calculations were therefore made to determine at what elevation above the ground an object hovering directly above gate C17 would *not* be visible to ATC tower personnel. It was determined that a five-foot six-inch-tall ATC specialist standing next to the console and facing Gate C17 would have a vertical view of about 30° arc. Additionally, if the same viewer were to lean forward over the console so as to increase this vertical angle, an additional 7–10° arc would be gained. Figure 5 is an elevation drawing of the tower incorporating all known dimensions.

With this information and the dimensions of the tower and distances to Gate C17, it is possible to calculate the height (above the airport surface at Gate C17) above which an object would not have been visible from the control tower for each of the two ATC controller body postures we determined were probable, for example, the ordinary lines of sight of the controllers in their working positions in the tower.

For the 30-degree visual elevation condition, we solve for the vertical segment (B) – (C) where tan 30° = Ht / 2068 = 1,194 feet. Solving for the 37-degree visual elevation in

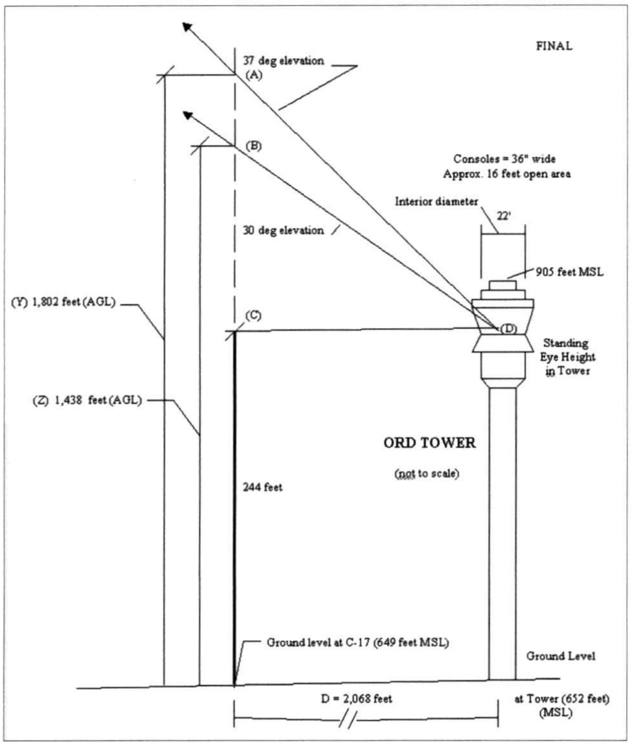


Figure 5. Vertical visibility limits from new control tower.

the same way, the segment (A) – (C) = 1,558 feet. To each of these values must be added the height of the controller in the tower or 244 feet. Thus, if an object were above about 1,438 feet (AGL) it would not have been visible from the tower *without* leaning forward and looking upward. Likewise, if an object were above about 1,802 feet (AGL) directly above Gate C17, it wouldn't be visible to a viewer in the tower who is leaning forward over the console and looking up into the sky. Perhaps this is why the tower controllers didn't see the object.

We are still faced with the dilemma of not knowing the actual altitude of the UAP except that it was beneath 1,900 feet AGL, the approximate base of the cloud layer at the time. For the remainder of this article, the claim by the FAA that the ATC specialist(s) in the tower did not see the UAP will be accepted. Therefore, we conclude that the UAP hovered somewhere between about 1,438 feet and 1,900 feet altitude (AGL).

WHEN DID THE UAP LEAVE?

This is an important yet difficult question to answer. It is possible to identify only an approximate range of times. Witness A said it left about two minutes after he first saw it, or at about 4:32 p.m. Witnesses B and C watched the object from the cockpit of an empty B777 for at least 3.2 minutes (and as long as 5 minutes) sometime between 3:57:30 p.m. and about 4:18 p.m. The UAP had gone by about 4:20 p.m. when they had reached their destination at the United maintenance hangar. Thus, according to them the object probably departed around 4:18 p.m.

Witness D said the object "disappeared within a fraction of a second" after he had been looking at it for approximately one minute (i.e., at about 4:33 or 4:34 p.m.), depending on how long it took him to reach the viewing location at Gate C5. Without definitive data we will assume that the UAP departed at about 4:34 p.m. (± 1 min.). This time is important for the discussions of the hole in the cloud, possible radar contact, and when ATC personnel looked for it from the control tower.

HOW DID THE UAP RISE?

As substantiated by several witnesses, the UAP did not rise vertically but at a slight angle to the east. Witness D, who was standing about 878 feet southeast of Gate C17, said that the object rose in an easterly direction (toward Concourse B) and entered the cloud layer after traveling only about one-quarter to one-half the distance between Concourses B and C, or between 200 and 400 feet laterally.

Witness J.H. was standing about a mile away to the east in the parking lot of the International Terminal. She said that it rose at "a very slight angle towards me and to my left—very slight angle. . . . Where we were, we could see the sideways motion and tell it was coming towards us a little."

The reports that the UAP departed almost vertically are significant in that the airspace directly above Gate C17, at least up to 7,000 feet altitude, is probably one of the lesser traveled areas of local sky above the airport. This is because commercial aircraft approach its runways from locations lying on radial extensions of the respective runway. On takeoff, aircraft do not fly directly over the terminal area but along an approximate extension of their takeoff runway. Thus, the present UAP was hovering in perhaps one of the safest areas of the entire ORD airspace.

It is also interesting to note that this UAP hovered within the tower controller's blind spot.

RADAR RECORDS

Several radar systems provide coverage of the O'Hare Airport area, including radars at or near the airport and distant FAA radars. Additionally, weather radar records were searched for evidence of an unusual phenomenon over the airport in the period in question.

None of the radar analyses found evidence of primary radar returns at the approximate time of the sighting within even a mile of United Gate C17. It is little wonder that tower personnel were not alerted. However, it also should be made clear that lack of a radar return from the hovering object does not mean that the object was not really there. Indeed, there have been a number of documented instances where an object was seen visually by flight crew but there was no ground radar contact.

In this section we concentrate on the ASR-9 ORD#1 antenna, which is located only about 0.8 miles west of United Airline's Concourse C and about 955 feet from the west edge of Runway 32L. Given the range sensitivity per-

(continued on page 23)

THE SOUTHWESTERN UFO WAVE OF 1957

BY ANTONIO F. RULLÁN

Fifty years ago in November, a major UFO wave took place in the United States that filled the newspapers with UFO stories. This wave followed the classic waves of 1947 and 1952. The 1957 wave was similar to the 1947 wave in its explosive nature but had a greater number of reported sightings.[1] The UFO wave of 1952 had more reported cases but was not an explosive wave; UFO reports came in gradually throughout the year. The 1957 wave stands out because it was the first U.S. wave involving vehicle interference (VI) cases. It was these UFO stories of close encounters between automobiles and UFOs that drew the most media attention. This wave, however, was not the first documented VI wave because a similar one had occurred in France in October 1954.

While the 1957 wave had a broad distribution that included South America, Europe, and Australia, my focus here is narrowly on the set of cases in the southwestern United States. The 1957 UFO wave started in the Southwest, where it was particularly intense for nine days, and then fizzled abruptly while continuing throughout the country. I concentrate on the vehicle interference cases because they represent the key change that this wave brought to the media, Project Blue Book, and the American psyche. While these cases were not the first of this type reported to Blue Book, or the first documented in the press, their sudden appearance and concentration in the Southwest dominated the press for the first time in America.[2] And while nocturnal light cases were the most numerous type of report, it was the VI cases that drew the most media attention. They were richer in content and more difficult to explain away.

For case compilation, I relied on the UFOCAT database and the Blue Book case files, plus collections of newspaper clippings provided by Loren Gross and Jan Aldrich. In this article, the Southwest includes Arizona, Utah, New Mexico, Colorado, Texas, Oklahoma, and Kansas. The additional newspaper clippings added 41 new UFO cases, including five additional VI cases (beyond those included in Rodeghier's vehicle interference catalog, 1981).

TIME DISTRIBUTION

Since the wave took place mainly in November, I wanted to look at all the sightings in the region from October through December to determine the size of the peak and rate of increase and decline of reports. A total of 209 UFO cases were found for this time period in the Southwest. Twenty-four of these cases were VI cases, 157 were nocturnal/mysterious lights, 19 were daylight disks, 5 were CE1 cases, and 4 were non-VI CE2 cases. Figure 1 shows a histogram of all the UFO cases reported to the press and Blue Book during this three-month period. The chart separates the VI cases that

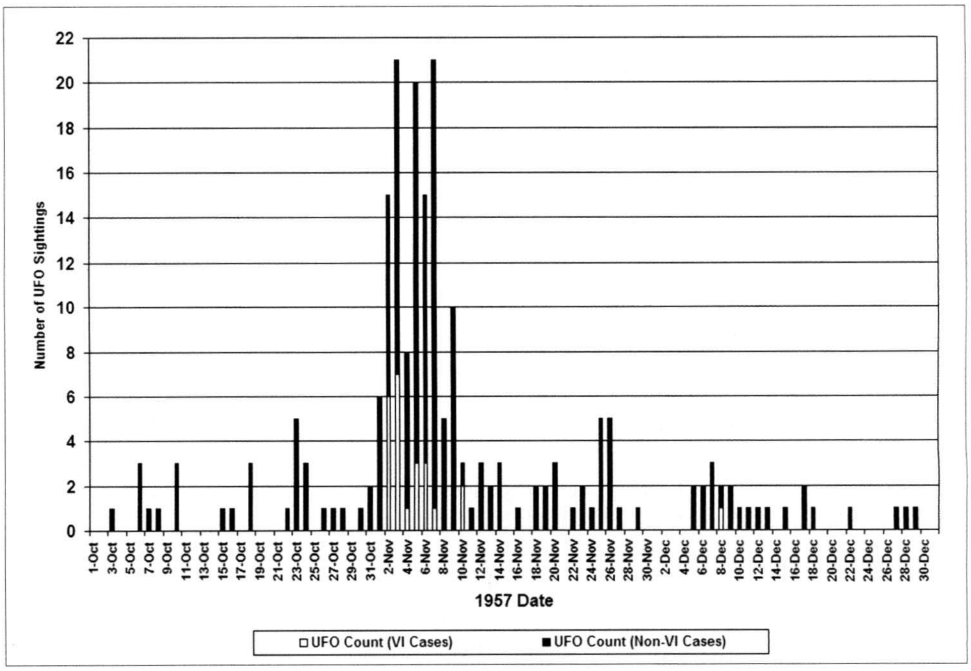


Fig. 1. Frequency count per day of UFO cases reported in the Southwest between October 1 and December 31, 1957.

Antonio F. Rullán is a decision analyst in the energy industry. He has worked over 20 years in the oil refining and petrochemical industry and resides in California..

reported electromagnetic interference with the witnesses' car (i.e., engine stoppage, headlights failed, radio interference) from all the others.

Figure 1 shows that the Southwest VI wave started on November 2, peaked on November 3, and lasted about nine days. By early December, the number of reported UFO cases matched the same level reported in October before the wave started. Of interest is that the sudden increase in the number of VI cases being reported occurred at the same time as the sudden increase in non-VI cases reported during this 9-day period. This correlation suggests that they were not independent events.

The 24 vehicle interference UFO cases were similar in general aspects and different in the details. Most of these cases involved a glowing egg-shaped ball of light that either hovered near the car or flew over the car causing the car engine, headlights, radio, and other electronic devices to fail or stop momentarily. Table 1 summarizes these cases and lists the type of vehicular effects that were described by the witnesses.

Whatever happened in the Southwest that first week of November, it was sudden, spread like wildfire, and then suddenly stopped. The pattern fits Jerome Clark's (1996, p. 575) five-step characterization of an Explosive Wave:

1. A triggering event of inherently spectacular nature and high publicity. (The triggering events were the Levelland sightings that occurred between November 2 and 3 and which made the AP wires by the next day.)

2. An outpouring of reports favored with extensive and generally positive media coverage during the next few days.

Table 1. Summary of 24 UFO cases that involved vehicle interference

No.	Date	Central Time	Location	Effects on Vehicle
1	Nov. 2	3:30 a.m.	Canadian, Texas	Extinguished car headlights
2	Nov. 2	8:00 p.m.	Amarillo, Texas	Car engine and battery died
3	Nov. 2	8:30 p.m.	Between Seminole and Seagraves, Texas	Car engine and headlights died
4	Nov. 2	10:50 p.m.	4 miles west of Levelland, Texas	Car headlights went out and motor died
5	Nov. 2	11:35 p.m.	Shallowater, Texas	Car lights and radio went out
6	Nov. 2	11:50 p.m.	4 miles east of Levelland, Texas	Car engine died and headlights went out
7	Nov. 3	12:00 a.m.	10 miles NE of Levelland, Texas	Car engine died and headlights went out
8	Nov. 3	12:05 a.m.	9 miles east of Levelland, one mile west of Smyer	Ammeter began jumping, then motor gradually died, then the lights and radio went out
9	Nov. 3	12:15 a.m.	11 miles north of Levelland, near Whitharral, Texas	Car engine died and headlights went out
10	Nov. 3	12:45 a.m.	5 miles west of Levelland, Texas	Truck engine died and lights went out
11	Nov. 3	1:15 a.m.	5 miles NW of Levelland, Texas	Truck stalled and the lights went out
12	Nov. 3	9:00 p.m.	Palo Duro Canyon, Amarillo, Texas	Killed the car engine, lights, and battery
13	Nov. 3	10:00 p.m.	Roswell, New Mexico	Car lights sputtered and went out
14	Nov. 4	2:30 p.m.	Orogrande, New Mexico	Car radio and engine failed.
15	Nov. 5	7:30 p.m.	El Paso, Texas	Car stalled and lights went out
16	Nov. 5	8:30 p.m.	Hobbs, New Mexico	Car light and engines failed
17	Nov. 5	9:30 p.m.	San Antonio, Texas	Car lights, radio and engine failed
18	Nov. 6	12:00 a.m.	Between Hobbs and Carlsbad, New Mexico	Car engine and lights were shut
19	Nov. 6	1:15 a.m.	Santa Fe, New Mexico	Stopped car engine, car clock, and eyewitness's wristwatch
20	Nov. 6	4:30 a.m.	Houston, Texas	Killed car radio and car engine
21	Nov. 7	10:20 a.m.	Orogrande, New Mexico	Affected the car speedometer
22	Nov. 10	7:50 p.m.	Sweetwater, Texas	Car motor stalled and car lights went out
23	Nov. 10	8:20 p.m.	Carrizozo, New Mexico	Shut car lights
24	Dec. 8	5:30 p.m.	Woodward, Oklahoma	Stopped car engine, headlights, radio, heater, and wipers

(This was evidenced by all the newspaper clippings obtained from many towns in New Mexico, Texas, Kansas, and Oklahoma that covered the major and local UFO cases.)

3. Followed by the spread of sightings over a widening area. (This was evidenced by the spread of UFO sightings away from Levelland in all directions and generally within a 260-mile radius.)

4. An increase in hoaxes and unfavorable media attention. (The only hoax of which I am aware took place in Grapevine, Texas, on November 6, and it was reported only in the Fort Worth papers. Nevertheless, unfavorable media attention did start on November 5 when the Air Force issued a special press release to the effect that no evidence of UFOs had been found and all but 2% of cases had been explained.)

5. A rapid diminution of reports starting a few days after the peak. (Seven days after the peak, the wave was essentially over in the Southwest.)

GEOGRAPHICAL DISTRIBUTION

The 209 UFO cases reported in the Southwest from October through the end of December 1957 are plotted on the map in Figure 2. VI cases are shown as light-colored pins and non-VI cases are shown as dark-colored pins. The map is centered in Levelland, Texas, where the most famous case took place and where the highest number of VI cases occurred.

Table 2 shows the distribution of reported UFO cases by state. About 80% of all UFO reports and all but one of the VI cases took place in Texas and New Mexico, so sometimes this wave is called the TX-NM Wave of 1957. Of interest, no VI case reports were found in Arizona, Utah, Colorado, or Kansas. This implies that whatever phenomenon was causing the car engine/light shutdowns had a limited range within the Southwest. The UFOCAT database, however, shows that many UFO cases were also reported in California, the Midwest, and the East Coast. Moreover, Rodeghier's VI database includes 19 VI cases in other states during this same period.[3] Thus, if the same VI phenomenon that was observed in the Southwest moved on to the West or the Midwest, then it does not appear to have gone through Arizona, Utah, Kansas, or East Texas because there are no records of VI cases in those regions during the three-month period. This observation suggests that the phenomenon does not spread in a continuous two-dimensional fashion like the weather.

Table 2. Distribution of reported UFO cases (Oct. 1–Dec. 31, 1957) in the Southwestern U.S. by state

State	Texas	New Mexico	Colorado	Oklahoma	Kansas	Arizona	Utah
Total UFO Reports	115	51	10	12	7	12	2

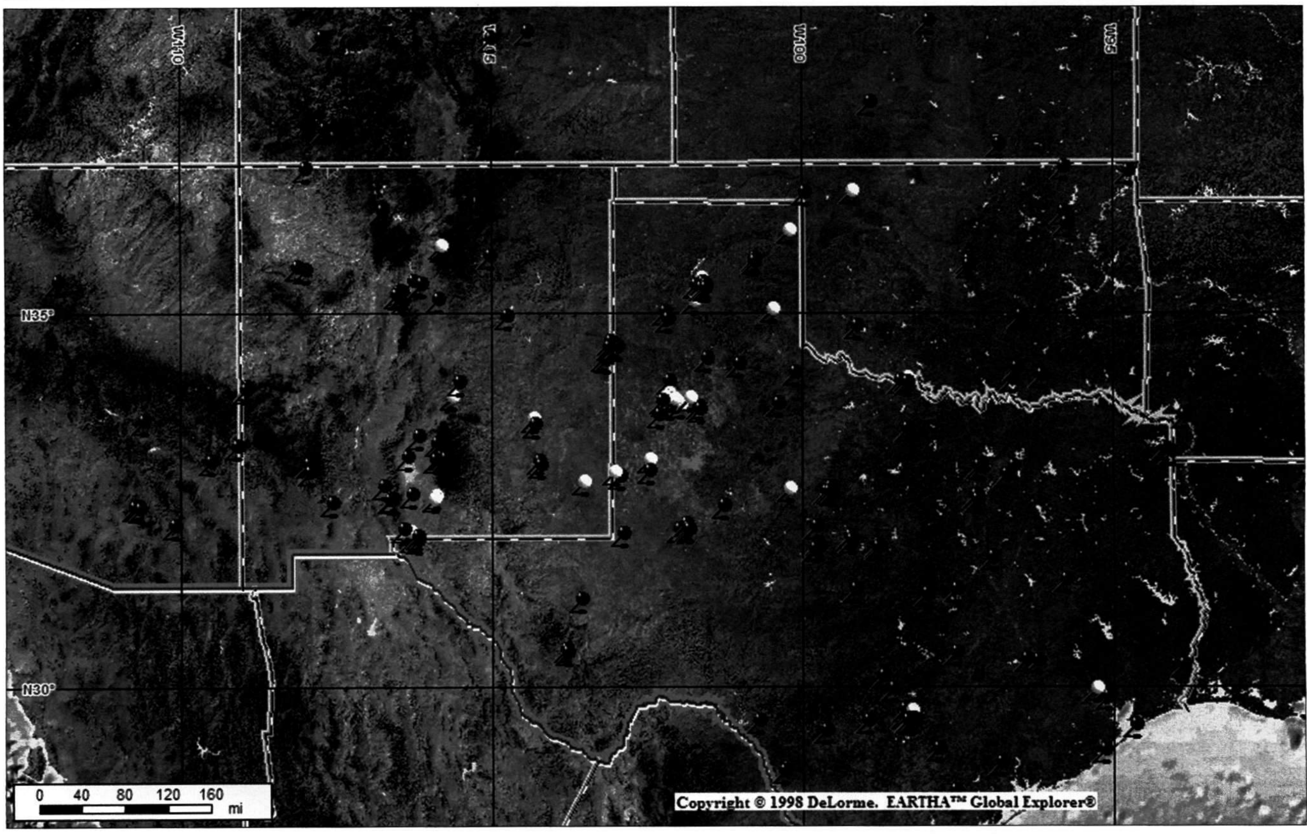


Fig. 2. Map of the U.S. Southwest with dark pins indicating non-VI UFO cases and light pins indicating VI UFO cases (Oct. 1–Dec. 31, 1957).

Before the Levelland UFO reports started coming in (on November 2 at 10:50 p.m. Central), three other VI cases took place in Texas. The first was in Canadian (northeast of Levelland) on November 2 at 3:30 a.m. This was followed by one event in Amarillo at 8:00 p.m. and one south of Levelland (between Seagraves and Seminole) at 8:30 p.m. After November 3, the wave moved southwest towards El Paso, northwest towards Santa Fe, east to Wichita Falls, southeast toward San Antonio and Houston, and northeast toward Woodward, Oklahoma.

On the map in Figure 3, lines are drawn from Levelland (the theoretical hub of VI cases) to the other towns where VI cases were reported that were furthest in that direction from Levelland. During the peak nine-day period, all VI cases and 85% of the non-VI cases occurred within this hexagon.

Table 3. Distance between Levelland and other key towns with VI cases

Target Town	Distance from Levelland (miles)
Wichita Falls, Tex.	224
Woodward, Okla.	259
Santa Fe, N.Mex.	249
El Paso, Tex.	269
San Antonio, Tex.	366
Houston, Tex.	490

During the three-month period (October 1 through December 31), 67% of the non-VI cases occurred within this hexagon. The hexagon is not symmetric, and the distances between Levelland and the six key towns are shown in Table 3. Figure 3 shows that the explosive Southwest wave of 1957 had a limited range. I did not find any VI reports in or near other big Southwest cities such as Dallas, Oklahoma City, Colorado Springs, Tucson, or Phoenix.

SPACE-TIME DISTRIBUTION

Another way of looking at the data is to review how the VI cases moved in time through space. Figure 4 plots all VI cases as a function of longitude, latitude, and time (date/hour). The x-y axis of Figure 4 represents the latitude and longitude; the z-axis or vertical axis represents time. Cases are included from November 2 to 11, the height of the wave. The center of the x-y plane corresponds to the coordinates for Levelland. All the points are connected with a line to represent movement in time. This line does not assume that all data points were caused by the same object or stimulus.

Figure 4 shows that from November 2 through November 5, there was a general movement of the reported VI phenomenon to the Southwest from the panhandle of Texas. This trend ended in November 5 with 3 exceptions; two movements to the southeast and one movement to the northwest. There was a case reported in San Antonio on November 5 (9:30 p.m.), one in Houston on November 6

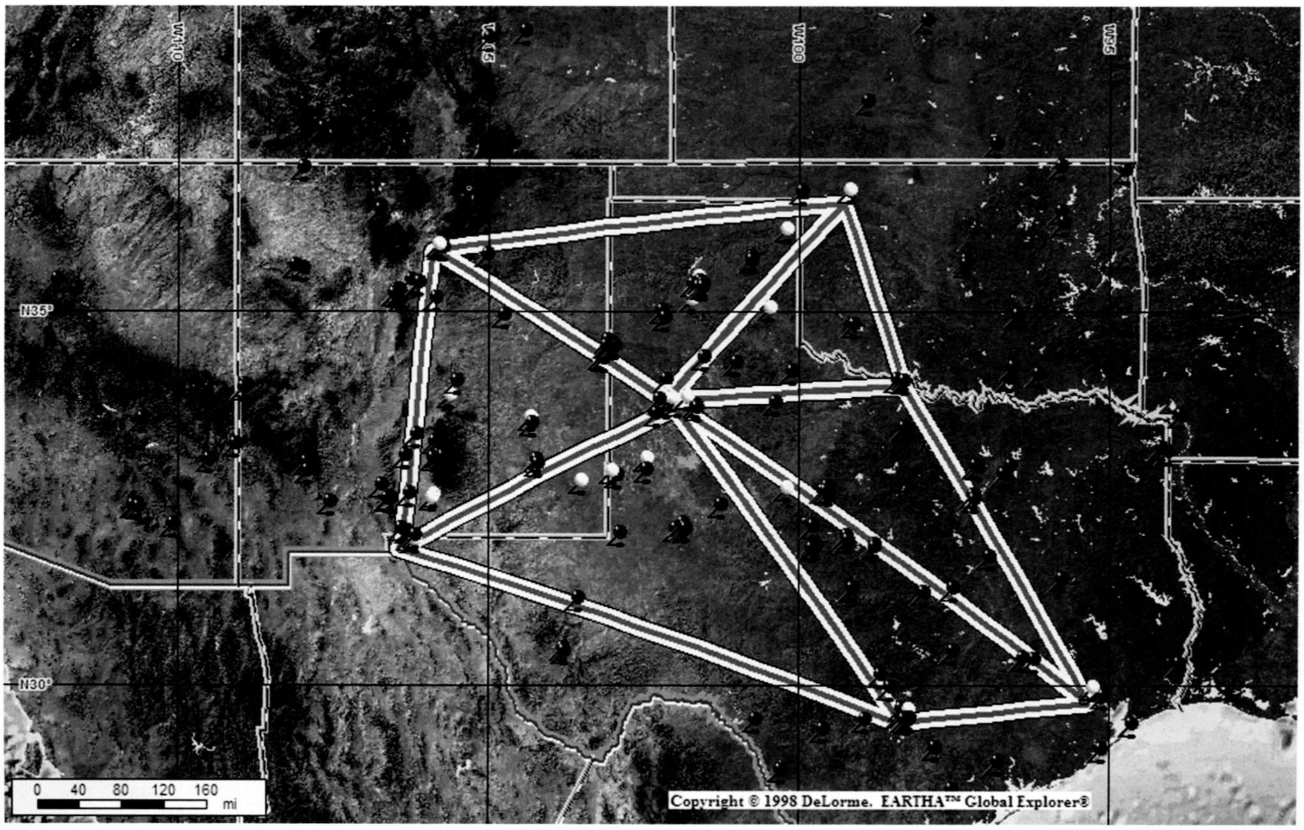


Fig. 3. Map of the U.S. Southwest connecting the Levelland VI hub to six other towns where VI cases were reported.

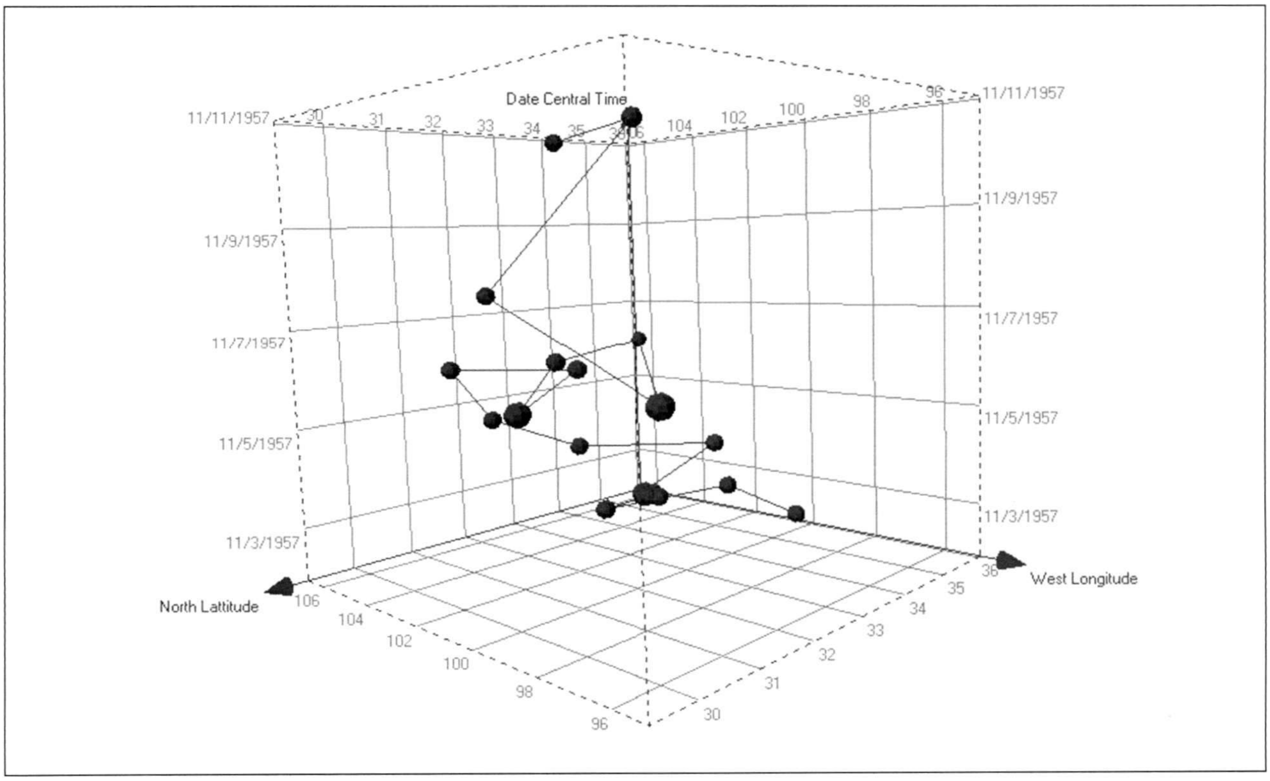


Fig. 4. Reported VI cases plotted as a function of space and time.

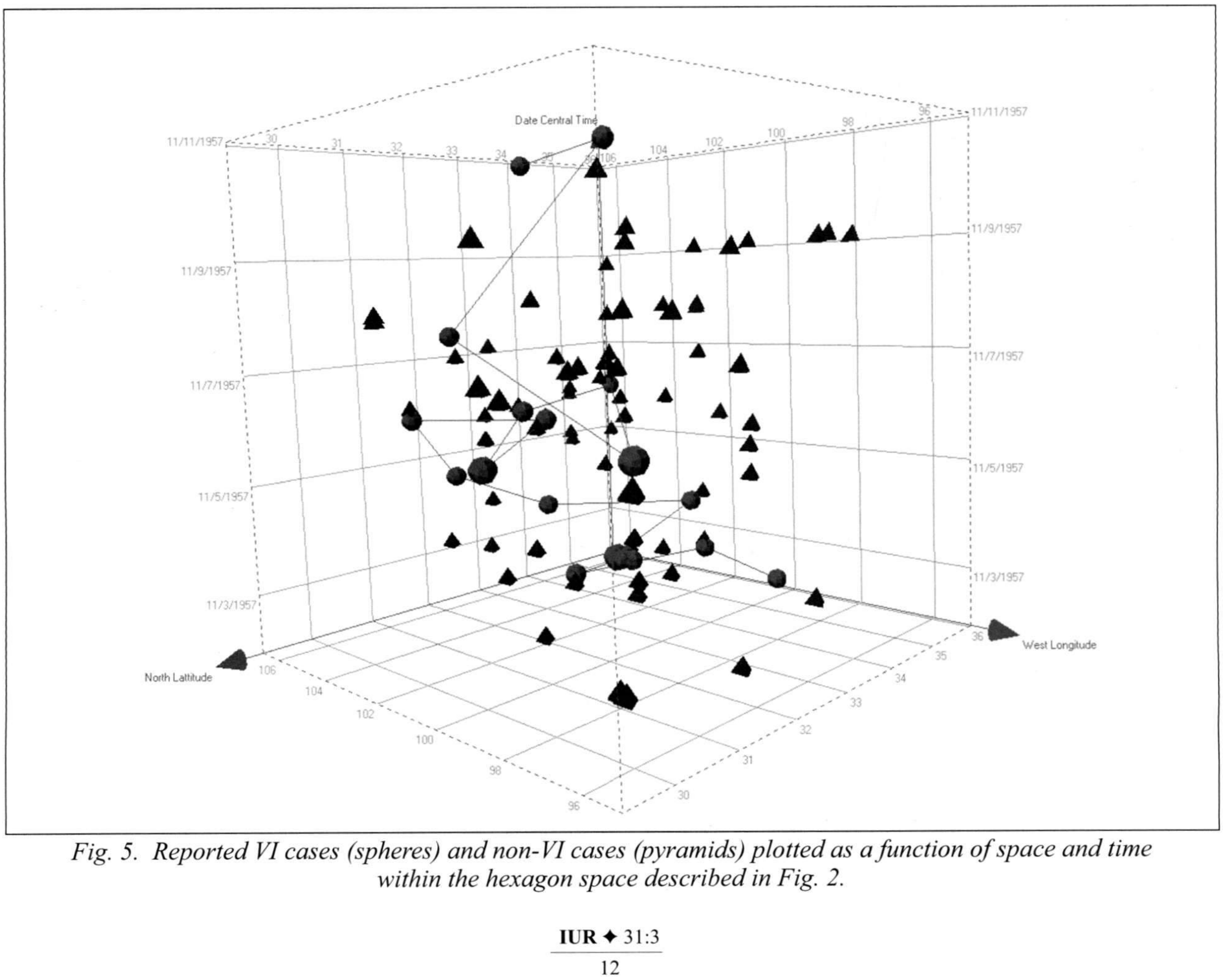


Fig. 5. Reported VI cases (spheres) and non-VI cases (pyramids) plotted as a function of space and time within the hexagon space described in Fig. 2.

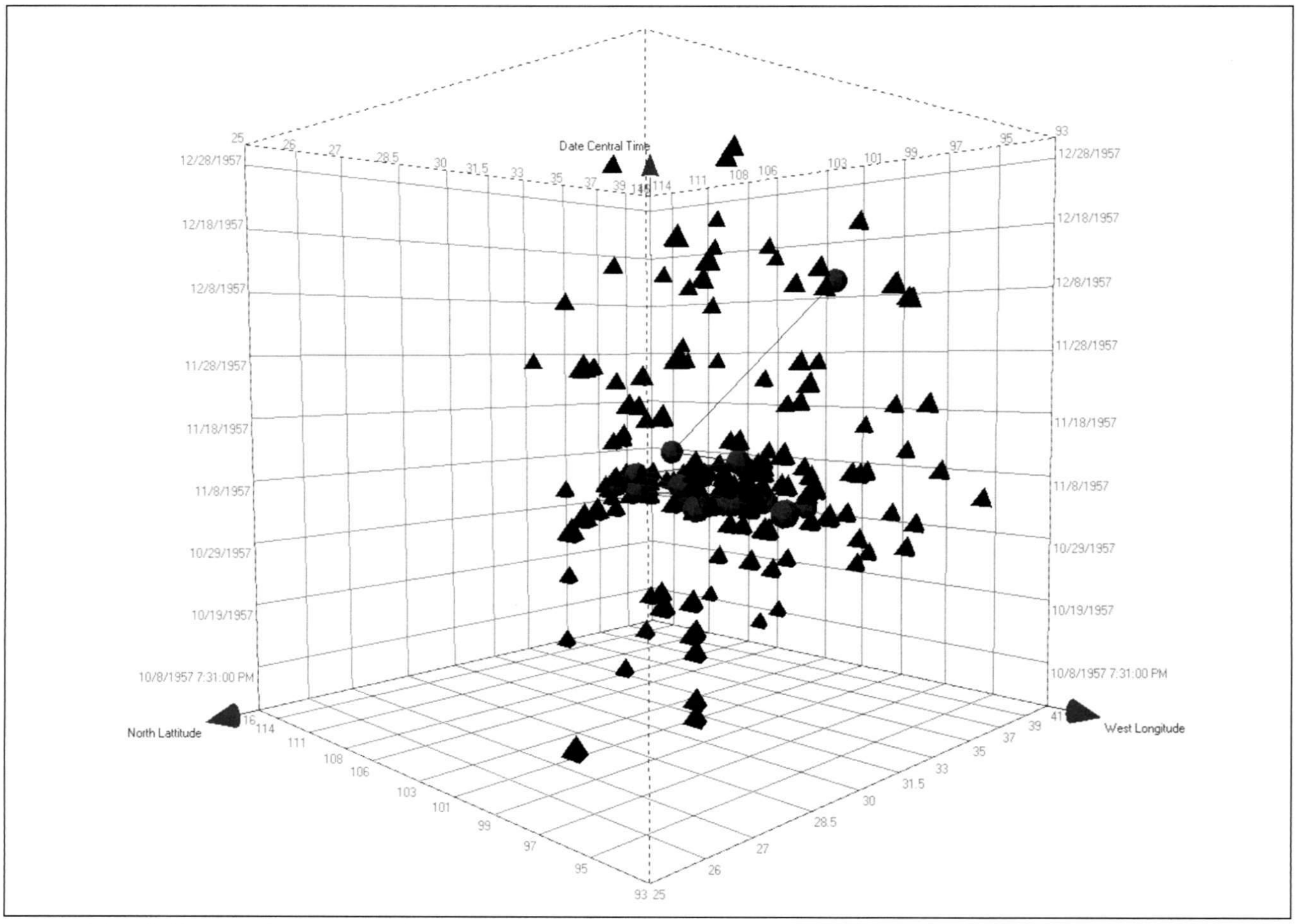


Fig. 6. Reported VI cases (spheres) and non-VI cases (pyramids) plotted as a function of space and time from Oct. 1 through Dec. 31, 1957.

(4:30 a.m.), and one in Santa Fe on November 6 (1:15 a.m.). The southwesterly movement of the VI reports for the first four days of the wave is intriguing. This could be explained by a weather front (that presumably causes anomalous atmospheric phenomena) which moved southwest from the Texas panhandle[4] (I did not check the weather patterns for this region). The southwesterly moving weather front idea, however, suddenly loses credibility when similar reports appear in San Antonio and Houston (unless we explain these away as social contagion).

In Figure 5, all the other non-VI UFO cases are added to this 3D map (whose X-Y coordinates are bounded roughly by the hexagon shown in Figure 3). These non-VI cases represent about 85% of the non-VI cases reported during this time period in the Southwest. Figure 5 shows that most of these non-VI sightings were within the 260-mile radius from Levelland and appear to be distributed equally over a 9-day period.

Figure 6 plots all the UFO cases reported in the Southwest from October 1 through December 31. This plot shows that in October there were few UFO cases reported and these were limited in geographical area. Then on November 2, the explosion of UFO cases took place within nine days and within a limited area (dense cloud in middle of 3D graph). This explosive wave was followed by a decrease in the number of cases and a wider geographical distribution.[5]

HYPOTHESES FOR THE SOUTHWESTERN UFO WAVE

Whatever hypotheses are put forward need to explain the following observations and events.

A sudden jump in UFO reports that involved brilliant oval-shaped balls of light that flew over cars or landed nearby, causing the car's engine and headlights to shut temporarily. Twenty-three of these vehicle interference cases were reported in the Southwest over a period of nine days and within a 500-mile radius of Levelland, Texas. These reports were made during the same period as an explosive wave of non-vehicle interference UFO reports. Both waves peaked about the same time. During the first four days of the VI wave, the reports were moving in a southwesterly direction; then reports jumped southeast, northwest, and finally, northeast. These types of incidents and their magnitude have never been reported before in this region and have not occurred again in 50 years.

Of the 24 VI cases reported, Blue Book evaluated only seven. Blue Book conclusions were that three cases had unreliable witnesses, one case was imagined, one case was ball lightning, one case was lightning, and one case was a combination of a meteor plus an unreliable witness. Thus, according to Blue Book, the main explanatory hypotheses were ball lightning or unreliable reporting. Presumably, unreliable reporting means that the witnesses either embellished, imagined, or made up their stories as part of a social contagion or craze that started with the Levelland sightings.

For our purposes, however, the explanatory hypotheses can be broadened to include:

- Social contagion
- Ball lightning
- Unknown atmospheric phenomenon
- Intelligently controlled unknown object

Some people attribute the 1957 wave to a social contagion caused by the sudden hysteria in America after the launch of Sputniks I and II. After Sputnik I (the first artificial satellite) was launched on October 4, 1957, suddenly Americans started looking up at the sky and noticing things that they never paid attention to before (Venus, meteors, satellites, stars, etc.). The UFO report histogram in Figure 1, however, shows that after October 4 there was no significant increase in UFO sighting reports in the Southwest (or elsewhere in the United States). Sputnik II (the second artificial satellite that included a dog) was launched on November 3 at 2:30 GMT (November 2 at 8:30 p.m. Central). The news of the Sputnik II launch was not available in the press until after the famous Levelland cases took place (between November 2 at 10:50 p.m. and November 3 at 1:15 a.m. Central). For example, the *Lubbock Avalanche Journal* shared headlines on November 3 between the Levelland UFO sightings and Sputnik II. By November 4, most newspapers in the region were carrying both stories. It is pure coincidence that the Sputnik II launch and the famous Levelland sightings occurred on the same day and close in time. The wide press coverage of the Levelland sightings is sufficient to explain the trigger mechanism for the 1957 wave. The Sputnik II launch could have contributed to renewed interest in watching the night skies and reporting UFOs but it does not add explanatory power to the VI wave.

Social contagion, however, could still explain some of the UFO cases reported to the press. With regard to the flood of nocturnal light reports, it is not unreasonable to expect people to report sightings of Venus, stars, meteors, and other astronomical events as UFOs if they never before paid attention to the night sky. With regard to VI UFO cases, the social contagion can only be invoked if these cases were embellished or made up as part of the hysteria. While this is more difficult to prove, Blue Book concluded it was so in five of its VI cases (all were single-witness cases and 3 happened after the Levelland cases).

One VI case that could be due to social contagion was the Canadian, Texas, case. This report supposedly occurred on November 2, 1957, at 3:30 a.m. (before the Levelland sightings). However, it was not reported until November 4. It was a single-witness case that claimed that a saucer-shaped craft, with a white flag, landed next to the road, and a humanoid was standing next to the UFO. Blue Book concluded that the witness was unreliable.

Nevertheless, it is very doubtful that social contagion could explain all 24 VI cases because:

- Eleven of the VI cases involved multiple witnesses, and
- Some of the VI cases were reported before, during, or right after the key events at Levelland (before the press release).

The ball lightning hypothesis has its own difficulties explaining these VI cases because:

- There is no evidence that ball lightning can stop cars and put out headlights
- Most observers at the time of the incidents did not report lightning or stormy weather.

Moreover, in the latest ball lightning book by one of the field's experts, *Ball Lightning: An Unsolved Problem in Physics* (Stenhoff, p.70), the only case presented that is associated with a car was a 1985 incident in Wales. In this instance a red ball of fire, the size of the front wheel of a tractor, hit the car windshield and shattered it. This incident happened in daylight with no storm present, no thunder, and no lightning. The witness was driving his car when the BL hit it, but at no time did the car engine stop. Also of interest is that despite Blue Book's determination that the incidents at Levelland were ball lightning, those researchers don't list these cases in the ball lightning databases or books.

If, nevertheless, we give ball lightning the benefit of the doubt, it probably could not be the cause for all cases in this wave because the area covered (from Houston to Santa Fe, and from El Paso to Woodward, Oklahoma) was wide and the period covered was long enough (nine days) to include diverse weather conditions.

Another reason why ball lightning researchers do not embrace the CE2 cases from Levelland and its associated wave is that these UFO cases are not homogeneous. Based on my previous research on the seven Levelland VI cases (Rullán, 1999), I found that parameters like shape, size, color, type of motion, duration, and sound were different for all cases. The same observation applies to the additional 17 VI cases from the Southwestern wave. Thus, it is difficult to conclude that the same phenomenon was involved in all the cases. Possible explanations for the heterogeneity of the descriptions could be:

- There were multiple stimuli causing the sightings
- The sightings were caused by a phenomenon whose properties vary (maybe some unknown atmospheric phenomenon)
- The phenomenon that caused the observations was

Table 4: Anomalous observations from the 24 reported VI cases that don't fit the unknown atmospheric phenomena

Anomalous Observation	# of VI Cases Reported
1. Preference of object to hover or fly over dirt roads and paved highways.	24
2. Object departed after the witness got out of the car and approached it (as if intelligent)	3
3. Object emitted machine-like sound (high-pitched whine or whirring or humming)	3
4. Object caused a rush of wind	3
5. Object was blinking on and off like a neon light	2
6. Object appeared to be chasing or targeting car	2
7. Saucer-shaped craft was seen within 200 ft distance	2
8. Object was moving in circles	1
9. Object had its light off in the middle of the road	1
10. Object had red, green, and yellow lights	1
11. Humanoid was seen next to object	1

changing position in time and space and thus leading to totally different descriptions by the witnesses.[6]

The Intelligently Controlled Unknown Object hypothesis is reasonable because of anomalous observations reported in some of the 24 VI cases. Table 4 lists some of these difficult-to-explain observations. Nevertheless, all cases were different and not all cases reported anomalous features. Again, while the overall pattern is similar, when it comes to the detailed description of the VI cases there is a lack of homogeneity.

CONCLUSION

Given the diverse descriptions of what was observed during this wave, the causes of the VI wave very likely include the presence of a real, unknown phenomenon (which triggered the start of the wave and continued its presence throughout) plus social contagion (which explains not only the large number of non-VI cases but could explain some of the VI cases as well). The unknown phenomenon could be either an unknown atmospheric phenomenon or intelligently controlled unknown objects. Using Ockham's razor, we reject the idea that the explanation could include both. All the anomalous observations listed in Table 4 do not support the unknown atmospheric phenomenon hypothesis and tend to support the intelligently controlled unknown object hypothesis. However, we cannot reject either hypothesis because of the poor data quality and weak evidence in most of the cases.

In the end, each case must stand on its own. Unfortunately, all the evidence from these cases is anecdotal, most of the reports came from newspaper clippings, and few of the cases were investigated properly. While we can conclude that an explosive and mysterious UFO wave did hit the Southwest in November of 1957, we are not closer to knowing what caused it and why. Nevertheless, it is very unlikely that the wave was entirely caused by ball lightning, imagination, or pure social contagion.

NOTES

1. UFOCAT shows 455 more cases in 1957 than in 1947 or about a 33% increase.

2. The first VI case reported to Blue Book was in October 31, 1952, in Fayetteville, Georgia, where a blimp-shaped object hovered over a car and killed its radio. The case was classified as unknown by Blue Book.

3. Rodeghier's VI database shows 19 cases from Oct. 1 through Dec. 31, 1957, reported in non-Southwestern states: Indiana (2), Wyoming, North Carolina, Illinois (2), Alaska, California, Nebraska, Alabama, Ohio, New York (2), Louisiana, Missouri, New Hampshire, Nevada, Washington (2).

4. In a paper that Dr. James E. McDonald wrote in 1967 for the American Society of Newspaper Editors, he summarized his findings on the weather conditions in Levelland at the time of the sightings. McDonald writes: "I dug out the weather maps and rainfall data. A large, high-pressure area was moving southward over the Texas panhandle, completely antithetical to convective activity and lightning of any sort." Moreover, the *Lubbock Morning Avalanche* newspaper wrote that, "a thin cold front eased into the South Plains early Sunday morning (Nov. 3), sliding under warm air masses to trigger steady falling, general rains over West Texas."

5. The lone VI case that took place in December 8, 1957, was the only Southwestern VI case that did not occur within the 9 days of the explosive wave. This case occurred in Woodward, Oklahoma, and was not reported to the media. The witness wrote a letter to J. Allen Hynek (date unknown) describing the event and Hynek corresponded with the witness. This is a high-strangeness case that includes a close encounter with a domed flying saucer in addition to the typical VI features. The case file was obtained from CUFOS. Hynek wrote about this case in the article titled "The UFO Gap," published in *Playboy* 14, no. 12 (December 1967).

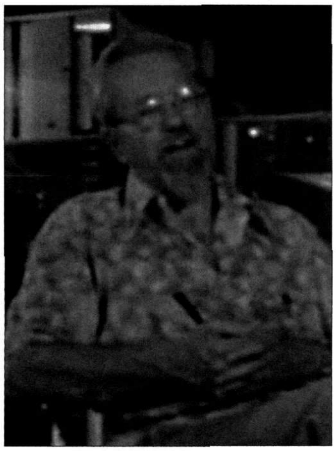
(continued on page 22)

30 YEARS OF *CLOSE ENCOUNTERS*

BY JENNIFER HENDERSON AND GEORGE M. EBERHART

The Hollywood blockbuster UFO film directed by Steven Spielberg, *Close Encounters of the Third Kind,* premiered in New York City on November 17, 1977. Although J. Allen Hynek had originated the term "close encounters" in his 1972 book *The UFO Experience: A Scientific Inquiry,* the movie's use of the phrase allowed it to leap from ufological jargon directly into timeless popular culture. An instant success, *Close Encounters* also cemented Spielberg's reputation (close on the dorsal fins of *Jaws*) as a major director, saved Columbia Pictures from a financial downturn, and put Hynek and the UFO phenomenon in the national spotlight where both gained new credibility amid a wave of public interest that has diminished little over the past 30 years.

Hynek recalled how his involvement with the film came about in an interview with Dennis Stacy in the February 1985 *MUFON UFO Journal*: "I'd heard that Spielberg was making a movie called 'Close Encounters of the Third Kind,' so I called him up and we had a very nice talk. He apparently wanted to make some kind of financial arrangement with me and here I made a very bad mistake. Unfortunately, I said 'Be my guest.' Of course it's impossible to copyright a title alone, so he didn't pay a thing for its use. He was kind enough, however, to ask me to be a technical consultant to the movie, so that worked out very well."



J. Allen Hynek on the Close Encounters *set in Mobile, Alabama.*

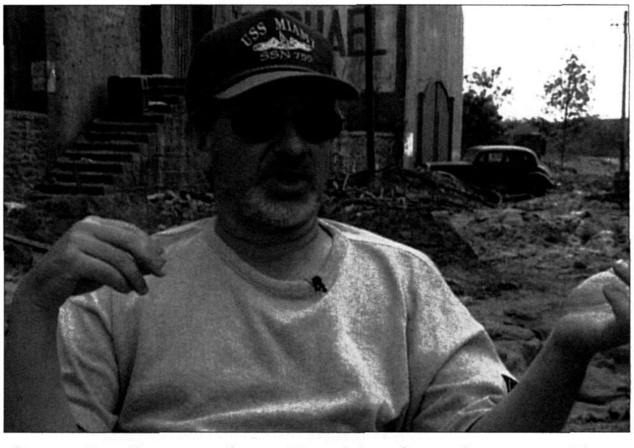
Apparently this conversation made Columbia Pictures a bit nervous about the legal rights. In a letter to Hynek dated January 20, 1976 (still in the CUFOS files), Spielberg wrote: "I must really apologize for not contacting you before assigning my forthcoming film your original chapter title [Chapter 10 of *The UFO Experience* was called "Close Encounters of the Third Kind"]. The title was suggested to me by a friend who considered 'The UFO Experience' required reading. In turn, I now require all creative patricipants to study the book as a primer toward understanding the UFO controversy.

"Apart from your letter, however, Columbia Pictures and Phillips Productions have decided against the use of that title for purely commercial reasons. Our new working title is 'Watch the Skies.'"

"Watch the skies," as every science-fiction buff knows, is the final line from the classic 1951 saucer movie, *The Thing from Another World.* Shortly after Hynek agreed to be a consultant on the film, Columbia apparently relented and went back to Spielberg's original title. However, *Watch the Skies* persists as the title of a 1977 "making of" featurette.

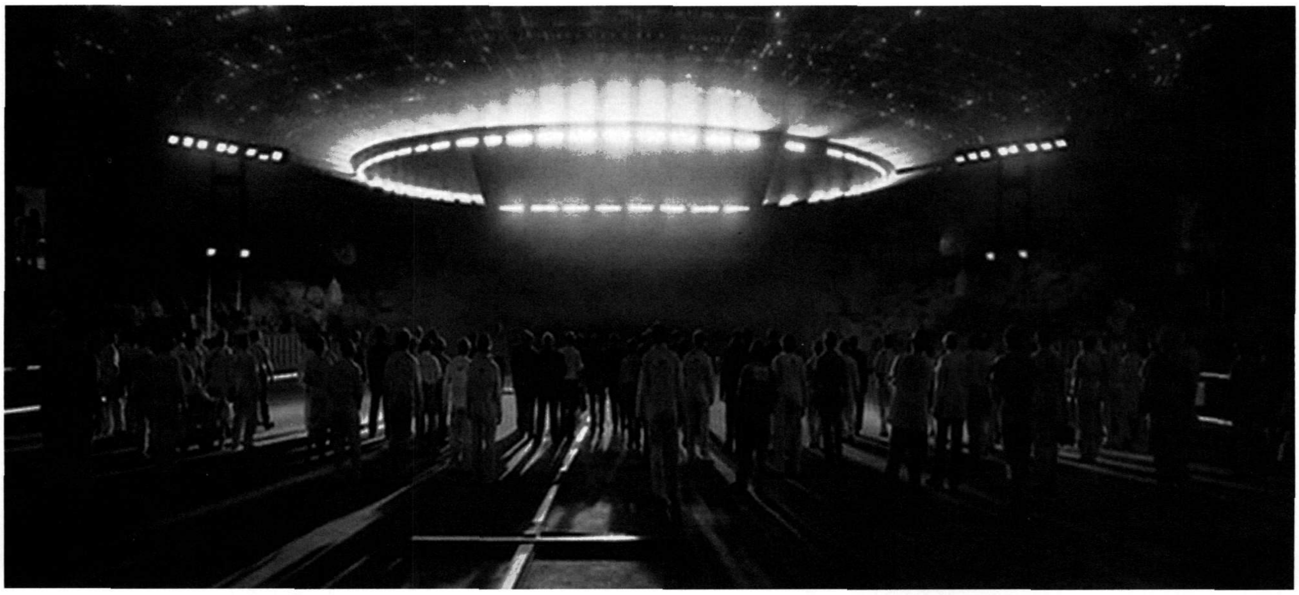
Did Hynek receive a fee for his help? He told Stacy in 1985, "A very small fee, but I actually lost money on that. What happened was that my publisher [Henry Regnery] withheld $25,000 in royalties from the sale of my book.... The argument was that I had sold the movie rights to Hollywood. I pointed out that I might be a dumb professor, but I wasn't so dumb as to know you don't sell movie rights for a thousand dollars. Finally, the thing was settled with me getting $15,000 and paying $9,000 legal fees out of that, so I didn't get very much."

Hynek recalled that he was only a technical consultant and gave advice on the "radio telescope and how a mili-



Steven Spielberg explains Hynek's role in the movie. From a 1997 Making of Close Encounters *documentary.*

Jennifer Henderson is a writer and the office manager for CUFOS in Chicago. George M. Eberhart is an editor at the American Library Association and a long-time collector of UFO information.



The dramatic contact scene at the end of Close Encounters of the Third Kind.

tary officer would say things." Although he sat down with Spielberg and went over the script, only some details got changed. "At that time I was caught up in the glamor of Hollywood myself," Hynek admitted, "seeing how a picture was made, so I went along with it and I had a lot of fun. But that's about all."

Spielberg credited Hynek's place in the movie as more of an inspirational role model. In a 1997 documentary, he explains that Hynek

> found the witness reports very credible and he found so many similarities from so many portions of America as well as throughout the world that he became a convert to the fact that the government was hiding something. . . . So I met with him and I used him and I picked his brain and he consulted with me. He's even in the movie in a bit of a scene in the third act.
>
> I owe a lot to his instilling in me a professional's point of view on this kind of field reporting, and he helped me make the movie more credible than it would have been without his existence.

The contact sequence in the movie was filmed, not at Devil's Tower, Wyoming, where some of the exteriors were shot, but inside a huge aircraft hangar in Mobile, Alabama. According to the Internet Movie Database, "The UFO landing site built for the movie was 27 meters high, 137 meters long, and 76 meters wide, making it the largest indoor film set ever constructed." The UFO was added in later, of course, so the actors had to gaze up at nothing and pretend to react to a landed mother ship with blinking lights.

Bob Balaban, who played UFO researcher David Laughlin in the film, recalls in *Spielberg, Truffaut and Me* (Titan Books, 2002), based on his diary at the time, that Hynek arrived on the set in Mobile on July 23, 1976:

> He is wearing a Hawaiian shirt and doesn't look like a scientist except for his neatly cropped Van Dyck beard which makes him look a little like the Wizard of Oz. He thinks the movie will help the UFO cause since Steven has done such thorough research, and based so much of the film on actual events. . . . No photographs can be taken on the set, so Hynek sits quietly in his canvas chair aiming a small tape recorder in the direction of the filming. Since he can't take pictures, he's taping the sounds in the hangar to help him remember this day.
>
> Later that night, Hynek gives a lecture to us interested UFO-ers. [Richard] Dreyfuss and Melinda [Dillon] are there, along with about forty other people. After a short spiel about subscribing to a UFO newsletter he's publishing [*IUR*], Hynek dims the lights and shows slides of various UFOs he's authenticated. He even shows a picture of an umbrella-like object he snapped from an airplane [probably the photo opposite p. 53 in Hynek's *UFO Experience*]. About a dozen people, including Melinda, raise their hands when Hynek asks if any of us have ever had a close encounter.

Hynek's eight-second cameo begins at 2 hours, 2 minutes, and 57 seconds into the film (the 137-minute "Collector's Edition" version of 1998), just after the pilot and crew of Flight 19 emerge from the landed UFO. He strolls to the front of the crowd, brushes his goatee, and inserts his pipe into his mouth. The timing is somewhat ironic, since Hynek had objected to Spielberg's associating UFOs with the missing Navy TBM Avenger bombers in 1945.

Hynek almost had another cameo appearance in the film. In part because Stanley Kubrick in *2001: A Space Odyssey* had chosen to avoid the thorny problem of how to portray realistic aliens, Spielberg decided early on that his UFOnauts would put in a physical appearance. He wanted them to look roughly like the short, big-headed, long-armed humanoids present in many UFO occupant cases of the 1970s, and he had the idea to use six-year-old girls dressed up as ETs. Makeup masters Frank Griffin and Tom Burman came up with a plan to fit about 50 girls in alien masks and false hands with long, spindly fingers. As it turned out, Spielberg decided he wanted a different look for his ETs, but not before filming Hynek in a scene with the girl aliens. David Ayres, an associate of Burman's, remembered the setup in *Cinefantastique,* vol. 7, no. 3/4, in 1978:

> [Spielberg] filmed scenes of aliens coming out of the ship and going over to touch [François] Truffaut and Dr. Hynek and some of the others. And it was really nice, because you saw the curiosity of these creatures. They pulled out Dr. Hynek's pipe and looked at it—and their eyes were moving—and then they stuck it in their nose and their mouth. And they pulled at his tie.

However, the effect was not what Spielberg wanted at the time, so the scenes were never used.

THE STORYLINE

Some of the plot elements for *Close Encounters* came from a two-and-a-half-hour 8mm UFO film, *Firelight,* that the 17-year-old Spielberg shot in Phoenix in 1963 ("one of the five worst films ever made," the director says now). Jean Weber Brill, who helped Spielberg with the makeup, said that "There were scenes in *Close Encounters* that were almost direct copies from *Firelight,* such as the lights appearing on the highway and the scene when the little boy looks out the door at the bright light. The storyline of *Close Encounters* was very similar, but obviously rewritten and more sophisticated." *Firelight* also featured a dysfunctional married couple not unlike the characters played by Richard Dreyfuss and Teri Garr.

In late 1970, Spielberg had also written a short story, never published, called "Experiences." He told interviewer Don Shay in *Cinefantastique* that the story was about a "lover's lane in a small midwestern town and a light show in the sky overhead that these kids see from inside their cars. That was my first piece of writing on the UFO idea—the first scene that went down on paper."

Close Encounters was at first assigned to screenwriter Paul Schrader, who had written *Taxi Driver* and *American Gigolo,* but Spielberg did not like what he came up with and decided to do it himself, creating five or six scripts over two years:

> . . . I ingested a lot of information, but what came out was pretty much representative of my imagination more than documented facts. The design of the UFOs was my own. That was something I just did by making lots of black-and-white pencil drawings with arrows and notes indicating the colors I wanted. But even though the light display on the UFO was mine, the idea of intense acetylene light was something that has been reported tens of thousands of times by witnesses all over the world.

The UFO sequence that traumatizes Richard Dreyfuss's character was based in part on the famous Portage County police chase that took place April 17, 1966, when police cruisers chased a large UFO—which one officer described as looking like an "ice cream cone with a sort of partly melted down top"—for 60 miles from Ohio to Pennsylvania. Hynek had provided a summary of the case on pages 100–107 of *The UFO Experience.*

Spielberg was also probably influenced by the books of French-American UFO researcher Jacques Vallee, after whom the character of the scientist Claude Lacombe (played by Truffaut) is modeled, although Spielberg did not meet Vallee until after the film was completed. Other 1970s-era themes enter the storyline at various points, among them:

- Bermuda Triangle–style disappearances as a result of alien activity;
- a radar-visual case with elements similar to those mentioned in Hynek's book;
- a massive, area-wide power outage reminiscent of the Northeast Blackout of November 1965, which some attributed at the time to UFO sabotage;
- intense vehicle-interference effects where a UFO stalls a truck's ignition and electrical system;
- a series of implanted dreams or visions in which the characters engage in ambiguous or bizarre attempts to decipher an apparent otherworldly contact;
- SETI-like signals from space;
- a sinister government cover-up featuring black helicopters, clandestine military maneuvers on American soil, and a secret international silence group (symbolized by the black triangle on a white background that appears on podiums and shoulder patches); and
- pre-Hopkins/Strieber abduction scenarios that are more confusing than terrifying.

In 1980 for the release of the recut "Special Edition" on videotape, Spielberg reluctantly (at the insistence of Columbia Pictures) added a scene at the end to show Dreyfuss's character after he entered the mother ship. However, the original ending was restored for the 1998 "Collector's Edition."

For the 30th anniversary of the film this year, Spielberg is issuing *Close Encounters* once again on November 13, in both DVD and Blu-ray formats. Through a process known as "seamless branching," the Blu-ray version contains all three versions on a single disc. The process identifies the differences, segments the footage, and then arranges it into three unique playlists so that frames used in all three films are only included on the disc once.

CLOSE ENCOUNTERS AND UFOS

Despite the predictions by skeptical pundits (such as Martin Gardner in the *New York Review of Books,* January 26, 1978) that the film would spark a wave of sightings after its release, UFO activity did not increase, despite a spike in public interest. CUFOS noted that people were submitting reports of sightings that took place years earlier, not recent

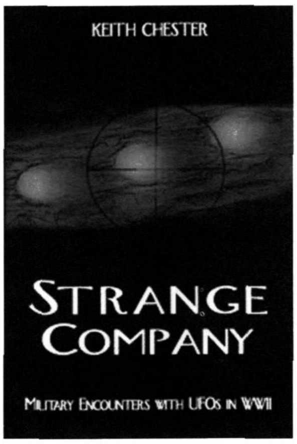
(continued on page 28)

BOOK REVIEW

> I'm an F-111 Jock, and I'm here to tell
> of Baghdad Billy, and his jet from hell
> We were well protected, with Eagles in tight
> but that didn't stop the man with the light....
>
> I'm here to tell you, the God's honest truth
> that Iraqi bandit, he ain't no spoof
> You don't have to worry, there is no way
> you'll see Baghdad Billy if you fly in the day
> But listen to me son, for I am right
> watch out for Baghdad Billy if you fly in the night!
>
> —*"The Ballad of Baghdad Billy": Foo Fighter "rap" by U.S. aircrew in the 1991 Persian Gulf War*[1]

Strange Company: Military Encounters with UFOs in World War II, by Keith Chester. San Antonio, Texas: Anomalist Books, July 2007. 320p., illustrated, index.

The enigmatic Foo Fighters have always been a sort of bastard child of the UFO family. For decades they made their de rigeur cameo appearances in popular histories of the phenomenon, where authors usually used these stories as evidence that the battles of the Second World War were being observed by Others, probably via small, remote-controlled probes that were the forerunners of occupied craft to come. Over and over we have read the same brief, somewhat vague accounts of American and British aircrews who saw ghostly lights accompanying their aircraft during aerial battles over Europe and Japan during the war. The name of the phenomenon itself, allegedly stemming from a flip catchphrase from a nearly forgotten comic strip ("Where there's Foo, there's fire!"), seemed to embody the character of this particular species of UFO—not quite serious, not quite respectable, not quite important enough, in light of later events, to merit more thorough investigation.



Keith Chester may have helped to change all that by producing the first book-length study of the Foo Fighter phenomenon of WWII. The result of many years of deep archival and documentary research and first-person interviews, *Strange Company* compiles a considerable amount of material on luminous phenomena seen during combat operations all over the world in the early 1940s. It also gives us new information on technical intelligence personnel who investigated these reports, some of whom would play significant roles in dealing with later UFO events.

Chester, who is an artist and filmmaker, traces his interest in the subject to a contact with well-known ufologist Len Stringfield, who had a vivid Foo Fighter encounter over the Pacific at the very end of the war. Stringfield was a strong proponent of the Extraterrestrial Hypothesis and, as Chester recounts in his introduction, this point of view helped shape Chester's approach to his own growing fascination with the Foo Fighters. Thus, like many books on the UFO subject, *Strange Company* is a compendium of case reports that are intended to convince the reader of the reality of extraterrestrial visitation. Its emphasis is on the aspects of the WWII sightings that do not conform to known or hypothesized advanced German weapons.

Chester has benefited from recent British document releases and weaves these reports into the chronology along with more familiar American Foo Fighter incidents. He also focuses on the activities of David Griggs, a noted scientist who was a point man for technical intelligence research on the Foo Fighters in both the European and Pacific theaters of the war. This is one of the most interesting new areas of research that Chester has undertaken. He is clearly attempting to ferret out evidence of a secret, high-level, research project concerned with the Foo Fighters, possibly involving Griggs, H. P. Robertson, and Louis Alvarez, on the theory that certain senior scientific and intelligence circles had evidence of the extraterrestrial reality of UFOs well before the 1947 sighting wave began, possibly helping to explain the speedy institution of the cover-up policy.

The very term "Foo Fighter" complicates analysis of the phenomenon by deceptively forcing a wide variety of anomalies into one mental compartment. In reality, the types of reports that received the term ranged across a broad spectrum. Of course, there are the familiar small glows seen near aircraft, which the British called simply and accurately "balls of light" in their intelligence reports. There are also nighttime "streaks of light," "rockets," and "jet trails," which were often distinguished from the previous category by high-speed motion. Daytime incidents frequently described metallic-looking small discs, donuts, and spheres. Another daytime category involved rocket or bomb-like objects, mystery fighter aircraft of unknown origin resembling Allied aircraft, and even unknown airships. Also lumped in, but very different in nature, were unusual explosions that were regarded as some type of experimental antiaircraft weapon, or "flak."

In fact, from the case reports Chester references, it's obvious that Allied intelligence forces were seriously concerned with the probability that the flak and rocket type reports in particular actually did reflect German experimentation with bizarre new forms of antiaircraft devices. Their after-action interrogations of aircrew were clearly designed to extract accounts that might contain clues to the nature and effectiveness of these weapons. They also appear to have systematically weeded out the reports of most interest to ufologists—sightings with durations too long to be explainable by missile technology of the day, dogfights with balls of light, and the like. These types of incidents were apparently either discarded outright, or—if Chester is right—funneled to secret projects at higher levels than those concerned with even more advanced enemy technology.

One of the difficulties faced by researchers attempting to clarify this issue is the fact that, like the reports themselves, documentation on German experimental weapons is confusing and incomplete. Nazi weapon development was a bureaucratic mess, divided into many competing weapon-development fiefdoms and institutes. Dozens of laboratories would be tasked with development of various types of fuses, shells, missiles, and electronic guidance systems, some of which were pressed into limited use on an experimental basis. Records were poorly kept, lost, or destroyed at the end of the war, making it difficult to cross-reference tests of experimental devices with Foo Fighter encounters.

For example, one of the most fascinating daylight cases Chester recounts occurred during the famous U.S. bombing raid on Stuttgart in September 1943, when a mass of small disc-shaped objects fell through a formation of B-17s, apparently bursting into flame when contacting the wing of one aircraft, leading to its loss. This incident was taken quite seriously at the time at the highest levels of the U.S. military commands, since it seemed that the Germans had initiated use of some sort of radical new experimental weapon.

It seems highly likely that at least a portion of the daytime flak-like events and missile-like objects actually were experimental antiaircraft weapons. The Germans are known to have experimented with air-to-air bombing as a means of countering bomber formations, and it is well documented that several types of experimental antiaircraft missiles were developed that used novel television, radar, infrared, or acoustical homing guidance systems. There is no question that Allied intelligence was looking for specific information about weapons of this breed, as reflected by some of the incidents Chester recounts:

> In a letter from [MIT radar expert] H. Guyford Stever . . . to [Merle] A. Tuve, at the US embassy in London. . . . Stever stated that the RAF and USAAF were "rife" with reports of a German "sub-sonic guided chaser plane" resembling the [Messerschmitt] Me-163 [rocket-powered fighter] but without a cockpit. This new "chaser-plane" was called the Me-328. It had an estimated speed of 525 mph and had a flight duration of several minutes.
>
> Stever thought the Me-328 was remote controlled. . . . Crew interrogations revealed the remote-control missile/plane dived through their bomber formation, climbed rapidly back up above, then repeated the aerobatics. Confusion existed regarding the craft's purpose, and it was not understood if the missile/plane was designed to explode on proximity or ram the Allied bombers. . . .[2]

In fact such a missile did exist. It was called the Enzian and was a surface-to-air guided antiaircraft rocket that exactly resembled a miniature, unmanned Me-163 rocket plane. About 60 are said to have been built between 1944 and the end of the war, but none are known to have actually been used against U.S. bombers.[3] Do the reports Stever cites hint at actual combat application of the Enzian, or are they just myths of war? Should objects like these be lumped in with Foo Fighter reports? Stever did, and remarked to Tuve that one of the experts who might solve the puzzle was H. P. Robertson. Stever worked in Europe on technical intelligence issues with another radar expert, Luis Alvarez, and reported his findings to OSRD head Vannevar Bush.[4] Merle Tuve worked with J. Allen Hynek on missile and fuse technology at Johns Hopkins. This is just a small example of how deeply embedded the Foo Fighter issue was in the world of technical intelligence.

Another intriguing and puzzling fact involves the particular units that reported many of the most famous Foo Fighter sightings in Europe, such as the ones from the 415th Night Fighter Squadron that gave the objects their popular name. If the Foo Fighters were really ET reconnaissance vehicles, why were they apparently so fascinated with highly specialized and relatively small night-fighter units? One would think that British nighttime bombing raids, for example, would come in for the most scrutiny if the objects actually were ET probes, since these involved huge fleets of aircraft unleashing unprecedented destruction on entire cities.

While many bomber crews did see Foo Fighters on numerous occasions, the objects seem to have had a disproportionate interest in a handful of British-built night-fighters equipped with British radar sets and flown by American crews who were conducting lonely patrols over dark, hostile territory. What made night-fighters so fascinating? Did it have something to do with radar? More specifically, was the phenomenon some kind of side-effect of the particular primitive radar sets installed for the first time aboard aircraft? This idea seems to have occurred to Griggs and his colleagues at the time. As Chester notes, in the 1953 CIA Robertson Panel report, the scientists noted that the Foo Fighters were never fully explained, but one theory was that they might have been "electrostatic . . . or electromagnetic phenomena." The idea that the Foo Fighters were not material objects, but were somehow related to the electromagnetic environment, seems to lead to some interesting threads in later ufology. Nuclear physicist Edward Teller and others raised similar ideas relative to the Green Fireballs seen over the southwest U.S., and as recently as the 1990s the author of a British government UFO report (Condign) attempted to compile evidence for an electromagnetic explanation for UFOs.

Some familiar names crop up in *Strange Company.* Chester mentions a September 1943 report by a Col. W. M.

Burgess, Air Staff Intelligence, concerning the possibility that some of the daytime "silvery discs" were a form of antiaircraft incendiary device. This is the same Woodbury Burgess who in the 1950s was a brigadier general with Air Defense Command Intelligence (later a deputy director of the NSA), frequently interfaced with Project Blue Book under Captain Ruppelt, and was a driving force behind the 4602nd Air Intelligence Service Squadron and its dual mission of UFO report analysis and Soviet air crash exploitation. Another surprising name mentioned in passing is Commander Ian Fleming, Royal Navy, who was present at a September 1944 London technical intelligence conference that also included H. P. Robertson and our old friend Col. Howard McCoy of Wright Field's Air Technical Intelligence section. This particular meeting concerned coordination of Allied field teams that were fanning out in an urgent effort to document and exploit German advanced technology. One wonders what the future James Bond author may have thought of talk of Foo Fighters.

Readers will be intrigued by the new information but may be left wanting more. Ideally this book will help stimulate new interest in the subject and lead to unknown deep archival documents. Future editions would benefit by adding some documentation concerning the Nazi weapons that the Allies suspected were behind the Foo Fighter reports, such as the jets, missiles, and rocket bombs that had the bizarre appearance and high performance exhibited by the UFOs. Maps of sighting incidents correlated with known experimental weapon centers might clarify some reports. Comparison of truly anomalous Foo Fighter behavior with later UFO reports may lead to deeper understanding of the development of the overall phenomenon.

—Joel Carpenter

1. *Gulf War Air Power Survey, Vol. II: Operations / Effects and Effectiveness, Part 1* (Washington, D.C.: Government Printing Office, 1993), p. 194. www.project1947.com/acu2.htm.
2. *Strange Company,* p. 144.
3. Heinz J. Nowarra, *German Guided Missiles* (Atglen, Pa.: Schiffer Publishing Ltd, 1993).
4. www.ieee.org/portal/cms_docs_iportals/iportals/aboutus/history_center/oral_history/pdfs/Stever150.pdf. ✦

LETTERS

QUESTIONS ON BIG SUR

To the editor:

Concerning Robert Hastings's article in *IUR* ("A Shot Across the Bow: Another Look at the Big Sur Incident," Vol. 31, No. 1, pp. 3–11, 20–24), I have a few questions and comments. These come strictly from a layman's perspective rather than from that of superior knowledge.

To begin with, I will take on faith that a point of light on a film could be resolved with a magnifying glass into a rotating domed disc. Had the image been recorded directly on film, however, I would be very skeptical about such a determination, as I know—from my experience as an amateur astronomer and as a professional photographer—how glares on distant objects can distort tiny images on film.

For instance, the polar cap of Mars looks like a small dome or bubble, attached to a not much larger sphere, when photographed through a small telescope. Similarly, a glare on a small piece of jewelry can appear on film quite as large as the item itself, thus distorting it beyond recognition.

Thus I would have thought that at the very limited resolution available, Maj. Mansmann might have at least considered the possibility that his perceived image of a domed disc could have been due to a glare reflecting from any kind of elongated object. But . . . as the image was originally recorded electronically, I can't be certain that my misgivings remain valid.

Be that as it may, why is the shape of the object so important? I would think that far more interesting is the fact—according to Dr. Jacobs—that the unknown orbited the simulated warhead. From what little I know about motion in a vacuum, the only way an object can orbit another (excepting gravity) is by the continuous application of carefully directed power. So, regardless of shape, the important question is, who steered a powered object around the simulated warhead in flight? Even if the decoys mentioned by Kingston George were rocket-propelled, they would still need to be guided around the warhead in order to be consistent with Jacobs's testimony. But, I could be wrong in this reasoning.

Finally, I have one additional question to pose. My understanding of suborbital flight is that the trajectory is parabolic, where the nearly vertical components occur during exiting and reentering the atmosphere, and where most of the horizontal distance is traveled through a curved path through the vacuum of space. Why, then, would the mere tumbling of the warhead cause a shortfall of "hundreds of miles," since only during the more vertical reentry would the tumbling generate any significant braking? While I am certainly not on firm ground here, I nevertheless wonder whether the tumbling might not have been caused by an opposing or retarding force applied to the warhead by the unknown object. This, rather than the tumbling alone, might then account for the large distance discrepancy.

Is it possible to resolve this matter via physics and mathematics?

(I trust *IUR* will announce the availability of Mr. Hastings's forthcoming book.)

Gert Herb
Chicago, Illinois

ADAMSKI IN THE DESERT

To the editor:

Following the article that I wrote on George Hunt Williamson and Adamski, I received a long and interesting phone call from Ray Stanford, who knew both of them in that era of wild and woolly saucerdom and high hopes of contact.

Among the many fascinating things that Stanford told me were several insider comments relevant to the subject of the article. These included:

1. That GHW had visited Adamski not too long before the famous desert meeting, and that Adamski went into his trance-channeling act. (Ray Stanford watched Adamski do something similar, and said that he employed a somewhat ludicrous "Tibetan mask" through which he spoke as a Tibetan Master.) Adamski's channel told GHW that a spaceship would soon land in the desert, that important prints would be left behind, and that GHW should bring plaster of Paris to capture these imprints.
2. Out in the desert, Adamski had a trance that revealed he should go alone to the meeting (with someone driving him most of the way), and the others came along only later. He carried his telescope, but also a big box with unknown contents.
3. After the desert affair was over, Adamski gave GHW some negatives that he said he'd taken of the scout ship. GHW took them to Phoenix, and the newspaper offered to develop them. GHW said "I've never seen anything so phony in my life," and called Adamski, telling him so. He replied: "Burn 'em."
4. GHW told the above to Ray Stanford in several meetings they had in the 1955–1957 era. He said that although there were some distant lights in the sky out in the desert, no one saw anything remotely like Adamski's UFO. "I'd be surprised if there were any UFOs around."

Any UFO history buffs might be interested in reading about Ray Stanford's own sightings in 1954 (supported by police officer's affidavits), written up in the book *Look Up* (1958). Although he has repudiated the Adamskian theoretical material in the book as youthful naiveté, the case still stands as interesting. If you can't find *Look Up,* maybe you can access the case via *Fate* magazine (May 1956, pp. 12–18).

I'd like to thank Mr. Stanford and all who respond to publications to add what they know to the record.

Michael Swords
Kalamazoo, Michigan

◆

SOUTHWESTERN WAVE*—continued from page 15*

6. Two VI cases that include heterogeneous descriptions for the same object are the Betty and Barney Hill case of 1961 and the Woodward, Oklahoma, case of Dec. 8, 1957. The recent book on the Hill case (Friedman, 2007) documents the descriptions that the Hills gave of the same UFO while they were fully conscious. The UFO description changed over time from a star-like object, to a flash of light, to saucer-shaped craft and finally to an orange ball of fire on the road. Likewise, in the Woodward case, the eyewitness first saw a tremendous bright light that flew by. This light then became a saucer-shaped craft.

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UAP AT O'HARE—*continued from page 7*

formance of this system, one could postulate that in order to avoid detection by ORD#1 during its rapid ascent, the upper limit on the effective radar cross-section of the UAP at 2.7 to 2.9 GHz would be on the order of about 10^{-6} sq. meters, or about two orders of magnitude *smaller* than that of B-2 Spirit or F-22 Raptor stealth airplanes. Thus, an object smaller than about 2 feet width by 0.2 foot high by 0.6 foot long (using approximate B-2 dimensions, for example) would be undetected by this antenna, assuming the object did not otherwise possess exotic radar-canceling characteristics. Since the UAP was visually estimated to be on the order of 20 feet in diameter and most likely larger, it should have been detected by ORD#1 during its ascent.

Also, since this antenna was relatively near the reported location of the UAP, its beam would have struck it from below. Assuming a lateral separation of 5,497 feet and cloud base of 1,900 feet gives a vertical angle of about 19° from the horizontal up to the cloud base at the antenna. As the UAP continued to rise, now invisible to the naked eye because of the cloud, if it maintained a horizontal orientation, the ORD#1 beam would strike it at increasingly large angles, which would have increased its radar cross-section over time, making it increasingly conspicuous. Why it was not detected is not known.

FAA TOWER AND OTHER PERSONNEL

As is very clear from the transcripts of the control tower communications between the United ramp tower and several ATC personnel, everyone made a joke out of the presence of the alleged object. It appeared as if they were embarrassed to be talking about it. According to Witness B, "the ATC controller that was handling ground traffic made a few smart comments about the alleged UFO siting [sic] above the C terminal."

As early as November 27, 2006, an attempt was made to find out what the general feelings about this event were at FAA Headquarters. Our informant reported, "Nothing of interest was discovered at [FAA] headquarters, Washington, D.C., except skepticism about the nature of the event." When a NARCAP representative visited headquarters in January 2007, he was told that he had to contact the Chicago FAA office for any information about this incident.

In the first press coverage of this incident by Jon Hilkevitch (*Chicago Tribune*, January 1, 2007, p. 1; see www.chicagotribune.com/classified/automotive/columnists/chi-0701010141jan01,0,5874175.column), Craig Burzych, a union official and ATC specialist in the tower, was quoted as saying about this event, "To fly 7 million light years to O'Hare and then have to turn around and go home because your gate was occupied is simply unacceptable." What is unacceptable is this extremely cavalier and trivializing attitude toward UAP that is representative of much of today's aviation community.

FAA spokeswoman Elizabeth Isham Cory said that none of the tower controllers saw the object and "a preliminary check of radar found nothing out of the ordinary." She also added that the sighting was caused by a "weather phenomenon." She continued, "Our theory on this is that it was a weather phenomenon. That night was a perfect atmospheric condition in terms of low [cloud] ceiling and a lot of airport lights. When the lights shine up into the clouds sometimes you can see funny things. That's our take on it."

This kind of grossly oversimplified generalization that is not based on the actual facts at the time of the sightings only contributes to an attitude of disbelief and skepticism in others. In fact, the ramp lights had not yet been turned on! One unfortunate result is that other witnesses are inhibited from reporting their sighting of this phenomenon.

AIRLINE MANAGEMENT, FLIGHT CREWS, AND OTHERS

The first airline employee to make a general announcement within the company and to the FAA tower of the ongoing event was "Sylvia," a United Airlines zone coordinator in charge of 10 gates. She received several calls about the UAP. Another woman named "Sue" contacted the ATC tower at 4:30 p.m. to inquire if they could see anything. She was told that tower personnel looked and didn't see any object. This time is 15 minutes earlier than the time recorded for this same call by the FAA in its Daily Record of Facility Operation.

United Airlines allegedly began its own internal safety review of this incident the day after it occurred, but sometime before November 10 decided against a full investigation. The findings of their safety review are not known. The senior editor tried without success to discover the identity of the cockpit crew of United Flight 446. The two main reasons given for not providing this information were: (1) this was considered privileged company information in accordance with established policy, and (2) the flight operations department wasn't interested; they thought it was a waste of time. One might well ask why they weren't interested.

Megan McCarthy, a United Airlines spokeswoman, told Hilkevitch in December 2006, "There's nothing in the duty manager log, which is used to report unusual incidents. I checked around. There's no record of anything." A NARCAP-initiated FOIA request for all tower logs and communications, however, clearly showed: (1) three separate telephone inquiries from the United ramp tower (and management) concerning the UAP, and (2) a written notation of one of these calls in the FAA tower's Daily Record of Facility Operation.

During airline employee interviews conducted by Hilkevitch, the employees said that they were interviewed by United management and "instructed to write reports and draw pictures of what they observed." They were also allegedly told to not talk to anyone about what they saw. The senior editor could not locate any airline employee who would confirm this allegation.

Passengers at the terminal

Over the ensuing months there has been some effort made to try to locate other eyewitnesses in and around the O'Hare terminal. This was done mainly using notices placed on websites. Many emails were sent in by both identified and anonymous individuals; however, very few have been substantiated. One notable exception is Ms. J.H., who submitted 27 separate entries over a two-day period to the AboveTopSecret.com website. She was also interviewed by Sam Maranto (MUFON State Director for Illinois) on February 6 and 22, 2007. Her comments tend to support the testimony obtained from United Airlines employees in many respects and offer additional facts.

Radio and telephone communications

We submitted a FOIA request for "All (FAA) control tower voice recordings, tower supervisor logs, notes, and all other documents such as telephone and radio communications, notes, memos, etc., and Tower Ground Controller logs, notes, and all other documents such as telephone and/or radio communications, notes, memos, etc." where the UAP was mentioned.

The FOIA Analyst assigned to this job contacted the senior editor on January 12, 2007, claiming that the O'Hare tower had "checked its voice tapes for the date and time in question and had found relevant portions only on three phone calls (all from United ramp control) and one inbound ground frequency."

After analyzing the recordings, it became obvious that there were long time gaps when something relevant probably was transmitted, so we submitted a second FOIA for those periods, and received two additional recordings that held significant discussion of the UAP. Transcripts of these recordings are included next.

The following is the transcript of a telephone conversation between the United Zone Controller (R) and the FAA Area Supervisor (T1) located in O'Hare Tower. Brackets enclose editor's comments or uncertain transcription.

T1: Tower, this is Dave [initials DH: see Daily Record of Facility Operations, time 4:45 p.m.].

R: Hey Dave, this is Sue in the United tower.

T1: Hey Sue.

R: Hey, did you see a flying disc out by C17?

T1: Oh, it starts Sue. [Laughter.] Oh, we're Sorry Sue, [feminine laughter in background] a flying . . . you're seeing flying discs?

R: Well, that's what a pilot in the ramp area at C17 told us. They saw some flying disc above them. But we can't see above us.

T1: Come on Sue.

R: [You didn't see it?]

T1: Hey, you guys been celebrating the holidays or anything, or what? You're celebrating Christmas today? I haven't seen anything Sue, and if I did I wouldn't admit to it. No, I have not seen any flying disc at gate C17. [Sue continues to laugh.] Unless you've got a new aircraft you're bringing out that I don't know about.

R: No. [Sue continues to laugh.]

T1: No, I haven't seen anything Sue. [He becomes more serious; feminine laughter continues.] Nothing I know about.

R: All right.

T1: If I do I don't know what I'll do. [Both laugh.] I guess I'll back it up with you . . . but I'll keep an eye out.

R: All right. [Continues to laugh.]

T1: All right.

End Time 4:31:10 p.m.

The second recording was for the period 4:47 to 4:49 p.m., between United Ramp Tower (R) and the FAA Area Supervisor (T) in O'Hare tower.

T: Go ahead, tower, Dwight.

R: Dwight?

T: Yes.

R: What happened to Dave? Did he have to take a break because I called him?

T: No.

R: This is Sue from United. [Laughter.]

T: Yes. [Serious tone.]

R: (12-second pause.] There was a disc out there flying around.

T: There was a what?

R: A disc.

T: A disc?

R: Yeh.

T: Can you hang on one second?

R: Sure.

[33-second pause that contains ramp tower background chatter: He's working traffic OK, I'll be right back. All right.]

T: OK, I'm sorry what can I do for you?

R: I'm sorry, there was, I told Dave, there was a disc flying outside above Charley 17 and he thought I was pretty much high. But, um, I'm not high and I'm not drinking.

T: Yeh.

R: So, someone got a picture of it. So if you guys see it out there. . . .

T: A disc, like a Frisbee?

R: Like a UFO type thing.

T: Yeh, OK.

R: He got a picture of it. [Laughs.]

T: How, how, how high above Charley 17?

R: Well, it was above our tower. So.

T: Yeh.

R: So, if you happen to see anything. [She continues to laugh.]

T: You know, I'll keep a peeled eye for that.

R: OK.

T: Bye.

R: Bye.

T: All right.

The third telephone conversation was recorded between a male in the United Ramp Tower (R) and the Tower Flight Operations Manager (Position T2) for the period 4:52 to 4:53 pm.

T: Tower Cab, this is Dave.

R: Hi Dave??? [Unintelligible: this is ABC or ADC?]

T: Yeh Rog . . . [Rod? Uunintelligible here.]

R: [Garbled] Some of our employees . . . I don't know if you know anything about this, some of our pilots on the ground are reporting a UFO sighting at a thousand feet to the east side of the airport. Do you guys know anything about this?

T: You know, the ramp tower called me I want to say about 10–15 minutes ago. We have not seen anything up here.

R: OK.

T: And I guess she said it was right around gate C17.

R: OK.

T: But I mean, but since she called we have not seen anything up here.

R: OK.

T: Yeh, I mean, if we do, oh well . . . [Chuckles.]

R: Yeh, ah, no, I was just wondering maybe we'll, maybe we'll have to give them the 27 right.

T: Yeh, yeh, I know. Either that or you guys have unveiled a brand new aircraft and ain't been tellin' anyone about it.

R: Yeh. [Laughter.]

T: But, ah, no, we haven't seen anything but we'll surely keep an eye out for it, that's for sure.

R: Thank you very much.

T: No problem.

The fourth recording was between the Inbound Ground Controller Position (T) at O'Hare and various aircraft that had landed and were taxiing to their gates. He also directed other airplane surface movements. There are several interesting conversations found here. Tape start time 3:55 pm.

A/C2: United Maintenance forty-four, international ramp to, ah, north [port?].

T: United maintenance forty four. Join Alpha at Alpha eighteen. Taxi to north port via Alpha eighteen, Alpha.

A/C: Alpha eighteen, Alpha, United forty-four.

T: Ah, American, just coming across the bridge, who is that?

A/C: American nineteen ten.

T: Yeh, what's your gate number again?

A/C: K-10.

T: Yeh, Kilo ten. Give . . . ahh, OK. There's a United comin off the International [he'll] give way to you.

A/C: Yeh, OK. He'll give way.

T: Yeh, he'll give way to you. United, off the International ramp, the maintenance flight. You're to give way to one American MD-80 from your right and then continue.

A/C2: Give way to the MD-80, United forty four.

T: United six twenty three . . . [instructions] taxi to the gate.

A/C: Gateway 5668 . . . [garbled] . . . penalty box . . . we go to the north port.

T: Gateway 5668, you can use Alpha to north port and use caution for the, ah UFO. [Spoken in a matter-of-fact tone.]

A/C: For the north port. We'll take a look. [Slight chuckle.] [*Note:* The controller seems to be giving someone with him a situation briefing at this point.]

T: I got the chicken liner [garbled] . . . ah information. Ah, we're . . . I got a bit of information here. We're up to date here . . . [Currently?] our plan [here? or weird?] . . . [Interrupted by call.]

A/C: Ten-forty-four is on Bravo . . . ah, Foxtrot one, Bravo.

T: Ten forty-four . . . continue via Bravo. Taxi to the gate.

A/C: [Garbled; pilot acknowledges instruction.]

T: Ah, these guys [were on?] . . . [Interrupted by incoming A/C call.] [*Note:* It is now clear that a new person has arrived at the Inbound Ground Controller's Position. The controller is filling him in on what is taking place.]

A/C: Eagle four nineteen . . . on Bravo going to Delta seven.

T: Eagle four nineteen taxi via Bravo.

T: We got a couple guys on maintenance . . . down on [garbled] . . . over at tango over here. We got a United maintenance flight . . . I think it's a [brief pause] [Controller continues to explain what is happening to second person.]

T: [Speaks louder here as to a different person.] Yeh, United maintenance flight that's just joining Alpha from the International, what's your number again?

A/C: United maintenance forty-four.

T: That's four-four, thank you.

A/C: All right.

T: United forty four is goin' around the north [fork? port?] . . . ah, yeh, Eagle and Skywest over here comin' around this way. He's turnin' in. . . . We've really got no other gate holds.

[*Second voice:*] All right.

T: Somebody reported a UFO or a flying disc above Charley concourse, seriously.

[*Second voice:*] Excellent.

T: Yeh. . . . Um, so nobody . . .

[*Second voice:*] I'll keep my eyes open.

T: Nobody can see it. But use caution.

[*Second voice:*] All right.

T: Um . . . and a . . . [Laughter by two men.] That's pretty much it . . . [Garbled conversation.]

[Interrupted by female pilot voice.]

Fifth recording, radio conversations between FAA Inbound Ground Controller (T), and the pilot of Gateway Airlines Flight 5668 (A/C1), begins at 4:47:39.

T: Gateway 5668.

A/C1: Gateway 5668.

T: Yeh . . . look out your window. Do you see anything above United concourse? They actually, believe it or not, they called us and said, somebody observed a flying disc about a thousand feet above the, ah . . Gate Charley 17. Do you see anything over there? [Pause of about 5 sec.]

A/C1: Not that I can tell. I thought my job was stressful. [Laughter.]

A/C2 [Witness B]: Oh, we saw it a half hour ago.

T: Who saw it?

A/C2: A whole bunch of us over at Charley concourse.

T: Really? You guys did? Who is this?

A/C2: United taxi mechanics. [5 sec. pause.] We thought it was a balloon but we're not sure.

AFTERMATH EFFECTS ON WITNESSES

How were these airline employee witnesses treated by others after this event? The answer is familiar to those who study UAP seriously and underscores a reason why fewer and fewer legitimate witnesses are willing to come forward as time goes on. According to the *Chicago Tribune*, "One United employee appeared emotionally shaken by the sighting and 'experienced some religious issues' over it, one coworker said." During a TV interview on CNN, one of the witnesses said that his airline's management had not pressured him in any way to stay quiet and he had only received occasional ribbing from some coworkers. Most of the witnesses were very willing to cooperate with NARCAP immediately after the event but before their management found out about the public's response.

Now, several months after this incident, some of the eyewitnesses are experiencing typical aftermath effects. One of the witnesses wrote NARCAP saying, "sorry for being paranoid, but this information cannot be tied to any [name of a specific company] employee and must not publicly disclose my location. It is identifying. . . . I cannot have sources continuing to show me as the leak as it builds a case against me. . . . Anyway, I totally trust you and want to make sure you know exactly what will identify me so something isn't accidentally disclosed."

NARCAP has done everything it can to keep the identities of all witnesses confidential.

The *Chicago Tribune* stated, "Some of the witnesses, interviewed by the *Tribune*, said they are upset that neither the government nor the airline is probing the incident." In the words of an alleged United Airlines baggage handler witness, "Some of us are getting angry with this being hushed up with all the terrorism and TSA idiots hanging around. If we see a funny-looking bag all damn hell breaks loose, but park a funny silver thing a few hundred feet above a busy airport and everyone tries to hush it up. It just don't [sic] make sense."

WEATHER CONDITIONS

The greater Chicago area was under the influence of a stable air mass with low pressure gradients. The air mass was moist below about 2,000 feet (AGL) and quite dry above 2,000 feet. Surface winds were below 10 knots in the lower 5,000 feet. A few light rain showers had occurred earlier in the day. Cloud ceilings were 1,000 to 2,000 feet with visibility restricted to 3–5 miles in haze and fog.

Weather data for this location and date from the Automated Surface Observing System showed a cloud ceiling of 1,900 feet AGL at 4:51 p.m. This overcast had been rising gradually since about 10:00 a.m.

O'Hare International Airport, Chicago, observation on November 7, 2006, at 4:51 PM CST:
Sky: Overcast With Ceiling at 1,900 feet
Visibility: 4 Miles Haze
Wind Direction: West (270 Degrees Compass)
Wind Speed: 7 Knots
Temperature: 53 Degrees F
Dew point: 48 Degrees F
Relative Humidity: 83%
Altimeter Setting: 29.80 Inches of Mercury

HOLE-IN-CLOUD CONSIDERATIONS

In this section we concentrate on one particularly striking assertion occurring in the reports; namely, that the apparent oblate spheroid-shaped object or phenomenon produced a sharp edged "hole in the clouds" (HIC). If we assume only that the witnesses are not mistaken or dissembling, then the HIC must be considered to be a physical trace capable, in principle, of providing some information about the nature of the object or phenomenon.

What can the HIC tell us about whatever caused it? Ultimately, there is insufficient data in the reports to uniquely and definitively identify the presumptive "object" that caused the HIC. Indeed, we cannot even determine whether the object was solid or as ephemeral as, for example, self-organized plasma. However, we may hope to eliminate from consideration classes of explanations that do not make physical sense. Thus even if we cannot identify the ultimate cause of the sighting reports, we can make some reasonable inferences about what it was not. As usual, in attempting this we should apply Occam's razor and avoid needlessly invoking any unconventional physics.

The phenomenon we are attempting to explain is described in the words of one of the witnesses: At around 4:30 in the afternoon of November 7 several employees of United Airlines witnessed a "disc shaped [sic] object" that was seen "hovering over Gate C17 at the C concourse" of the Chicago O'Hare International Airport. The object, which could not be identified by witnesses as any known aircraft, was said to be "holding very steady and appeared to be trying to stay close to the cloud cover."

According to testimony given to NARCAP by one witness, after looking away for a short while, the witness "noticed that the craft [was] no longer there but there was an almost perfect circle in the cloud layer where the craft had been. The hole disappeared a few minutes later." One highly qualified witness (B) confirmed that he and Witness C saw the hole at about 4:20 p.m. He said, "I guess it had just left." Estimates given for the time of departure of the UAP and a fairly definite time when the hole in the cloud was still visible range from five to ten (mean seven and one-half) minutes.

Although the multiple-eyewitness accounts of this HIC may be unusual, they are not unprecedented. Reports of this odd manifestation have been associated with UAP sightings as far back as 1947, and as far afield as Newfoundland, England, and Scotland.

Because the freezing level above Chicago O'Hare on November 7 was at 10,000 feet, we know that the clouds in which the hole appeared consisted of water droplets only.

Classically, there are three ways to make a cloud of water droplets disappear. One way is to evaporate them (turning them back into invisible vapor); another way is to freeze them into ice particles (causing them to drop out of the sky); the third way is to aggregate them into large rain drops (which also fall out of the sky). We know it was not raining on November 7, 2006, or in any of the other three cases, so we need only consider evaporation and freezing. In fact, we may generalize this conclusion to eliminate any form of freezing as the removal method because falling ice crystals were not present at the time and location in question, and so concentrate instead on evaporation.

Only about 10% of the total drag force of a blunt body moving at subsonic velocities could show up immediately as heat. This means that the presumed oblate spheroid that ascended nearly vertically above Chicago O'Hare on November 7, 2006, could only have provided about 2.95 kJ/m^3 of heating to the surrounding air due to its kinetic energy. This calculation yields an effect more than three times too small to have produced cloud-droplet evaporation and provides a semiquantitative basis for the common-sense observation that solid objects such as aircraft, rockets, artillery rounds, and the like do not punch sharp-edged holes in clouds. We must look for an evaporation mechanism not limited to the energy transfer mechanism of aerodynamics.

In order for the size and shape to be preserved, the cloud water droplets must have been evaporated out to a distance that is of the same order as the body radius. Moreover, all the energy required for this evaporation must have been transferred from the object to the cloud droplets during the brief period they were within this range (about 10 milliseconds). Consideration of this fact yields a startling realization regarding the motion of the object—the relatively high power associated with its passage.

We have eliminated aerodynamics, or motion of the object, as the cause of the evaporation energy source, but still require some sort of energy-transfer mechanism that is attached to and centered on the phenomenon.

We postulate that sudden *in situ* evaporation of the water droplets constituting the cloud represents the least extraordinary physical process capable of explaining the observations. We estimate the minimum volumetric energy density required to cause such *in situ* evaporation as approximately 9.4 kJ/m^3, in the form of heat. We consider the remote possibility that a blunt body moving at high subsonic velocities through the air may dissipate sufficient amounts of aerodynamic energy through viscous friction to cause this amount of heating, but find that the likely heat production rate is too low.

We postulate that the instantaneous nature of the HIC formation, the circular shape, and its sharp edges all point to the direct emission of, for example, electromagnetic radiation from the surface of the oblate spheroid as the proximate cause of the HIC. We cannot identify the object or phenomenon lying inside the oblate spheroid surface, but two conclusions seem inescapable: (1) the object or phenomenon observed would have to have been something objectively and externally real to create the HIC effect; and, (2) the HIC phenomenon associated with this object cannot be explained by either conventional weather phenomena or conventional aerospace craft, whether acknowledged or unacknowledged.

POSSIBLE EXPLANATIONS FOR THE UAP

Within several days of the event Elizabeth Isham Cory, an FAA official, suggested that all the witnesses had seen and misperceived was an abnormal weather phenomenon or perhaps ground lights shining upward and reflecting off the bottom of the cloud layer at the time. "That night was a perfect atmospheric condition in terms of low [cloud] ceiling and a lot of airport lights," she said. "When the lights shine up into the clouds, sometimes you can see funny things. That's our take on it."

It should be noted that witness B and J.H. confirmed, independently, that the airport (nighttime) ramp lights had not yet come on. If the visual description of the UAP made by all of the present eyewitnesses that were interviewed are accurate, this particular explanation is absurd. It is so unreasonable as to be ludicrous and begs the question: How could someone who did not even see this particular UAP come to such a conclusion? As Maranto succinctly put it, "The answer to these questions [how can weather account for what was described] is that . . . the weather explanation is just complete and utter nonsense."

Other explanations carefully considered and ultimately dismissed as impossible included weather balloons, military "stealth" vehicles, lenticular clouds, and a jet airplane flying through the cloud cover causing the HIC.

Subsequent to the widespread media publication of the O'Hare incident, the investigation became even more complicated with the appearance of alleged photographs of the incident that were submitted by anonymous sources. Further analysis of these photographs has demonstrated that most of them are the product of image manipulation and fraudulent claims. Often these hoaxers acquire photographs from internet sources and manipulate them with software, based upon publicly available witness statements, to make them appear to be consistent with genuine publicized testimony.

SUMMARY AND CONCLUSIONS

The O'Hare case is an exceptionally robust example of the UAP phenomenon, not only in NARCAP's aviation-related niche, but also in the general literature.

This investigation, based upon the testimony of multiple eyewitnesses in different locations at O'Hare International Airport, has determined that a solid object on the order of 22 feet in diameter hovered over the United Airlines concourse area for at least 10 minutes, but was not detected either by radar or visually by air traffic controllers in the tower. For this reason, the object is considered a definite potential threat to flight operations at O'Hare.

Calculations have been presented which suggest that the UAP above Gate C17 possessed a high-energy density that produced a hole in the cloud layer as it rose through it. If the UAP was only 6.8 m (22 feet) in diameter, the power it would require to evaporate all the water droplets within a cloud column 300 meters long (assuming a vertical velocity of 300m/sec) in one second would be approximately 100 megawatts (MW). By comparison, the steady-state power consumption of a B747 airplane cruising at about 0.9 Mach is approximately 60 MW.

We cannot identify the object or phenomenon lying inside the reported oblate spheroid surface, but two conclusions seem inescapable: (1) the object or phenomenon observed would have to have been something objectively and externally real to create the Hole In Cloud effect; and, (2) the atmospheric phenomenon associated with this object cannot be explained by either conventional weather phenomena or conventional aerospace craft.

Within several days of the event, Elizabeth Isham Cory, an FAA official, suggested that all the witnesses had seen and misperceived was an abnormal weather phenomenon or perhaps ground lights shining upward and reflecting off the bottom of the cloud layer at the time. "That night was a perfect atmospheric condition in terms of low [cloud] ceiling and a lot of airport lights," she said. "When the lights shine up into the clouds, sometimes you can see funny things. That's our take on it." Cory's statement remains the only official explanation for the events. ✦

CLOSE ENCOUNTERS—*continued from page 18*

cases (*IUR,* February 1978, p. 8). Spielberg had agreed to distribute CUFOS-created UFO report forms at some theatres, and this may also have helped encourage the older reports. CUFOS office administrator Estelle Postol said in the January 7, 1978, *Moline (Ill.) Daily Dispatch* that the Center was receiving 10–15 reports daily, compared to 3–5 before the movie's release. "What the movie has done is put the subject in a more serious vein," she added. On the other hand, the White House was flooded with UFO mail as a direct result of the movie as well as President Carter's campaign promise one year earlier to release all classified UFO data (*Time,* December 12, 1977).

Jerome Clark, in the second edition of his *UFO Encyclopedia* (Omnigraphics, 1998), also noted:

> In later years, when abduction reports came to occupy a prominent role in the UFO phenomenon, skeptics and debunkers would argue that the big-headed humanoids and spindly gray alien in the film were responsible for comparable entities impressionable witnesses imagined seeing. Folklorist Thomas E. Bullard, the author of several scholarly monographs on the abduction phenomenon, put this hypothesis to a "simple test." He wrote, "If *Close Encounters* is as influential as skeptics allege, abductions reported prior to its release in October [sic] 1977 ought to show a variety of alien types, while subsequent reports ought to be more consistent, reflecting the alien image from the movie."

In 1994, Bullard conducted a study of 104 abduction reports (38 on record prior to the film, and 65 that came to light afterwards). In what will come as no surprise to anyone who has been reading *IUR* regularly, he concluded:

> The evidence acquits Steven Spielberg of creating the standard humanoid. These beings existed from the earliest days of the abduction phenomenon, and claims that *Close Encounters* planted the image simply do not square with the facts. A second truth is that standard humanoids did not rise to prominence in the wake of this movie; they were already there. . . . Standard humanoids [moreover] are not and never have been the only sort of occupants that abductees report. Monstrous, human, and exotic types comprised some 20% of the sample before *Close Encounters,* and this figure has remained more or less constant ever since.

Perhaps Spielberg's most significant achievement with *Close Encounters* was to portray aliens as powerful yet benign, a concept at odds with 1950s films and their bug-eyed monsters intent on conquering the planet. As Lester D. Friedman put it in *Citizen Spielberg* (University of Illinois Press, 2006), "*Close Encounters* presents a more progressive, tolerant, and even cosmopolitan vision of the universe than the vast majority of the science-fiction films preceding it." ✦